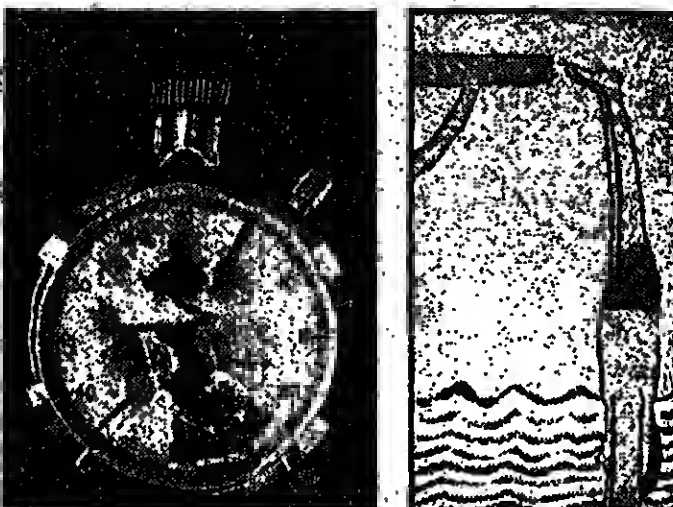
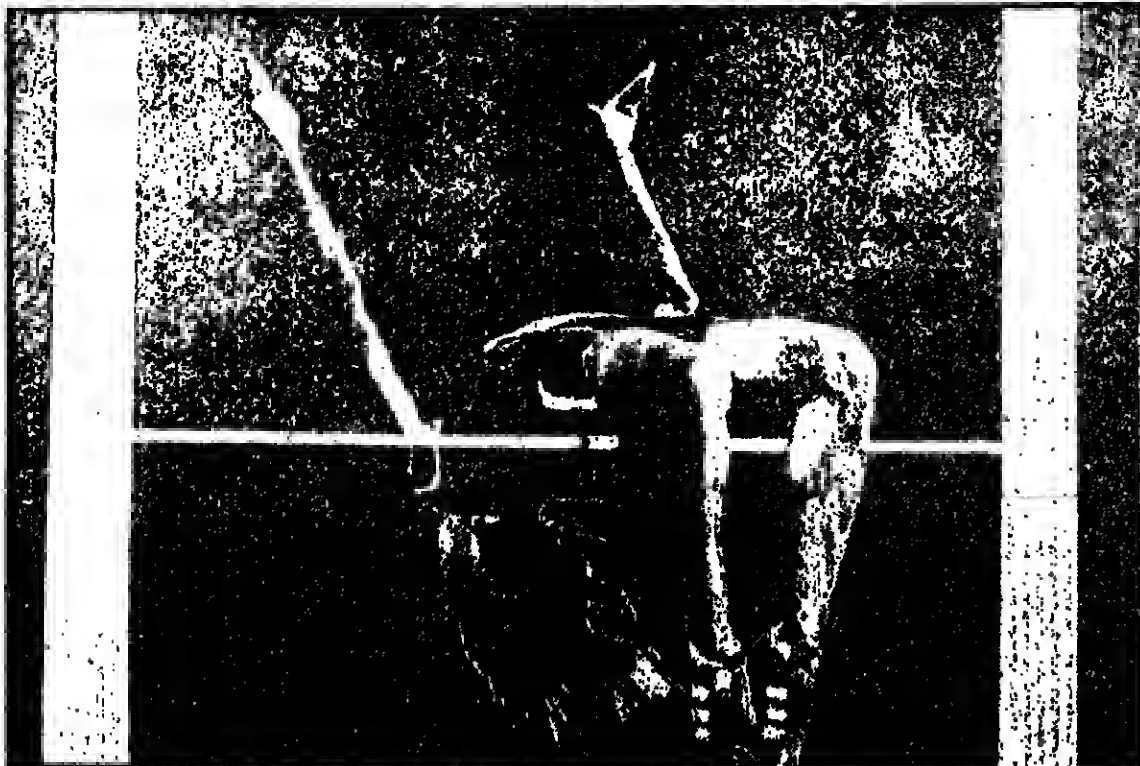


Our sporting life

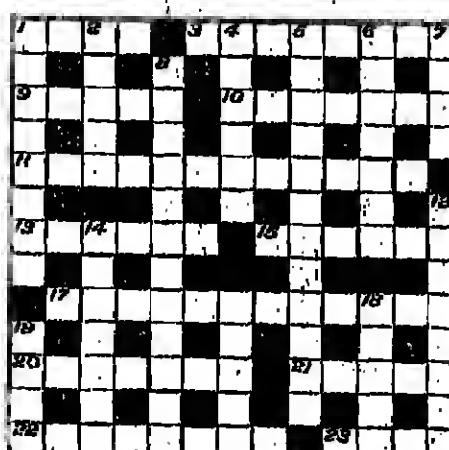


These illustrations of "My Sporting Life" were among 12 paintings by children chosen for a calendar to commemorate the 1980 Olympics in Moscow. They in turn were among the 100 entries in an International Art Competition, open to children between the ages of five and 16, which was run in the USSR in conjunction with the British Olympic Association's National Bazaar.

The top 100 paintings have been sent to Russia to compete in an arts competition organized by the USSR Olympic Committee, and the winners will be displayed with work from over the world at a special Olympic Games Children's Art Exhibition.

The calendar is produced by the British Olympic Association and National Bazaar and is available from David Knight & Sons, Suite 75, Grosvenor Gardens House, 35 Grosvenor Gardens, London SW1, at £2.50 plus postage and packing.

Crossword No 1,169

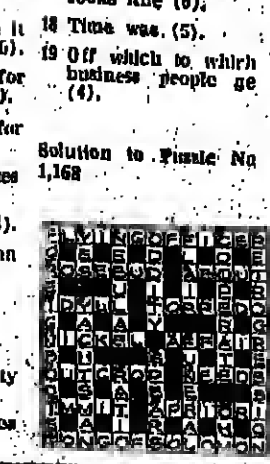


Across

- 1 A prisoner brought back for the festival (4).
- 3 Gave the English a royal line (8).
- 5 You got in on a singular occasion (5).
- 10 In 2 like what shown (7).
- 11 Half the Light Brigade (5, 7).
- 13 Make a reasonable denial (6).
- 15 Quick as the mail might be to the Post.

Down

- 1 Words reciprocity (4, 1).
- 2 A lady of the sea (5).



Bridge

I've hands from a recent rubber provided fairly of over. In the first my partner dealt and opened 3 clubs. West bid 3 diamonds, North 3 hearts, East 4 diamonds, and South 4 spades. This was passed to East, who doubled.

I was at fault on the second deal, but managed to recover. Partner (North) opened one diamond, and East came in with 2 clubs. With one of those brilliant hunches which separate players from fools I bid 3 no trumps (South), and instantly became a card-carrying goat.

South's opening bid cannot be approved; pre-empting with two aces is asking for trouble, and it is usually far better to bid slowly and find the right fit. West also bid badly, the better bid being hearts so that diamonds can later be shown if necessary. Neither of these errors mattered. In fact, since both sides found their fit, but not by chance, no deal.

East's double was potentially excellent, if his partner had understood it to be Lightner and found the trump lead. NS would have been down. What actually happened was that West led a heart—thinking his partner wanted diamonds—and declared himself fished the 10, an unnecessary play which could hardly gain.

With the aid of the club finesse the contract is now only 2 losers. I had to let the spade run to 2 clubs, at least 2 club ruffs in my queen, but I knew this East to

be a conservative player and overcalls were strong. He could have the king of spades and queen of diamonds also for a bid.

So I took the ace in dummy and led the jack of diamonds. There was a legitimate chance that opponent held the queen, but there was also a chance that East might be tempted to from Q-x, and this is what happened: a piece of play which presented us the contract.

Of course East could not gain by playing the queen. I held A-x in diamonds and not dare let the jack ride on West, since a second spade would put me four down. I surely be more likely to play with the ace and maybe the finesse the other way.

However, the real mistakes defence made at the beginning should lead the 4 of clubs, the queen, from this holding, all East had to do is duck the trick. South must win, and West inevitably lose 6 tricks. An effect which would have achieved if East had ducked a second trick, even after the lead had initially been led.

I was not especially proud of my NT bid was undoubtedly worst of the evening—but I was delighted. East and West fixed themselves by recourse ancient adage: "lead the ace, your partner's ace", and an honour with an honour. I had learnt those at the game of bridge, and some other joint.

John Gray

Nurseries need complete overhaul—psychologist

by Mark Jackson

Dr. Hugh Heward, a leading child psychologist, this week criticized the present style of nursery education and called for a complete rethinking of its aims and content. Dr. Heward, reader in education at London University's Institute of Education, told the British Psychological Society's educational and psychology division at a symposium this week. "Nursery education as it is practiced in this country today is based on an assumption of the intellectual development of children. I cannot support that view."

Dr. Heward said that nursery school years needed and must not be cut back. But teachers and psychologists were wrong if they believed that.

Dr. Heward said that the sort of language used in working-class homes is inadequate and has a marked effect on a child's later performance. "It is more important to provide children with a rich choice of activities than to get them used to completing a task, and to give children more chance to play with adults at nursery schools than at home," he said.

Most teachers and psychologists believe that a child's language is learned by imitating the language of adults. But Dr. Heward said that the language used in working-class homes is inadequate and has a marked effect on a child's later performance. "It is more important to provide children with a rich choice of activities than to get them used to completing a task, and to give children more chance to play with adults at nursery schools than at home," he said.

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Heads could win extra pay rise

Union leaders believe that headteachers will get a bigger pay rise than other teachers, following the Clegg Commission's decision to pay ward sisters more than nurses. On Monday, the unions entered Burnham negotiations with a demand for an immediate 10 per cent rise on account. Richard Garner reports.

Nurses' award sets precedent

Headteachers could have proportionately bigger pay increases than other teachers when Professor Clegg finally announces his recommendations—probably at the end of March.

Union leaders believe this following the 25 per cent pay rise for ward sisters included in the Clegg Commission's pay award for nurses. This compares with an average increase of only 19.5 per cent for other main grades.

One union leader, closely involved in the Clegg Commission, said: "They were seen as the linchpin of the nursing profession. The headteacher is our ward sister."

Union leaders also believe that Clegg will move towards restoring the differentials eroded by recent pay policies—and towards rewarding senior teachers for their responsibilities.

However, one controversial aspect of the report could be the section which deals with the hours that teachers work. According to union sources, the one question Professor Clegg asked teachers when he met them was whether they considered the 40-hour average working week for teachers as revealed in a survey by the National Foundation for Educational Research—to be a contractual commitment. They feel Clegg may recommend tighter controls.

A spokesman for the Clegg Commission said this week: "The method being used to compare teachers' pay is similar to that used for nurses". But he added:

Mr Carlisle bases core on maths and English

by Bob Doe

The Government wants a common curriculum consisting of at least 10 per cent of both English and maths, 10 to 20 per cent of science and a foreign language for at least two years of secondary schooling, according to their framework for the curriculum, published this week (see page 9).

Mr Mark Carlisle, the education secretary, says local authorities should make their curriculum policies known and collect information on the curriculum offered in their schools every year. Schools would improve if they published their aims, the consultation document says.

HM Inspectors went further in their comment on the common core plan. They say it is necessary to go beyond just naming the subjects to be included. National and local agreements on exactly what knowledge and skills every child should have were urgently required.

Teachers' associations reacted with little surprise to the two documents. The National Union of Teachers said the suggested "framework" was common practice in schools where resources permitted.

The NUT was worried by the Government's intention to match education to national needs. "National needs can vary enormously depending on who is doing the defining", the union said.

Mr John Sayer, president of the Secondary Heads Association said the documents were fair and realistic, but a consensus which existed in most schools but which was not shared by those responsible for distributing resources.

The National Association of Head Teachers wanted to know how science and modern languages could be part of the core unless more teachers were recruited and more resources made available to these

Mark Carlisle addressing the North of England Conference last week. Full report page 10.

Authorities' education committee welcomed the acknowledgement by Mr Carlisle that local education authorities were more than nominally responsible for the curriculum of their schools and colleges.

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This week

Can Finniston rescue the engineer?

Languages and the core: a good mix?

A. H. Halsey: class and the open society

The benefits of falling rolls

Sports Diary: cricket

The Carlisle framework

Classified

Leader, Comments 2
Platform 4
Personal Column 5
School to Work 11
Overseas news 12
Letters 14
Features 17
Reviews: Roy Fuller, Alan Ryan, John Russell Taylor, Myra Barrs, Tessa Blackstone, Christopher Price 20-26

Resources 31
Media 33
Talkback 34
Aristides, crossword 80

Extra

37 Travel 39-42

مكتبة من الأصل

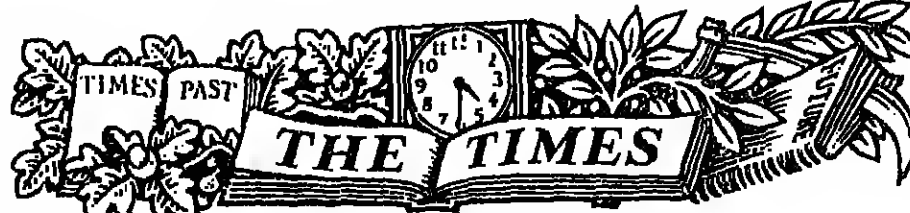
The importance of Mr. Enrich's *From* *and to the Curriculum* lies in the clarity of the change which it signifies, not in the actual words it contains. It is a clearly labelled and a commendable document. Perhaps the idea is to produce something more clear-cut when the consultations are complete. But perhaps not: if the DES are wise they will continue to prefer vagueness to precision and leave it to the LEAs and the schools to put flesh on the skeletal framework.

At one level of consideration, this is a feeble document. The sections on the aims of education are valueless. They may be, conceptually, logical first steps in the sequence of ideas which leads to some sort of agreed curriculum policy, but what emerges? Either the HMI's eight flimsy "areas of experience"—from which nothing particular can be deduced about school practice—or the six platinums which already sagged limply in the pages of the Green Paper, two years ago.

Article now tells us that "schools are likely to be more effective in achieving their curricular aims if these aims are clearly set out in writing". Nothing in this consultative document supports this confident statement; if anything, it confirms previous doubts about time-wasting efforts to define educational aims.

When it comes down to cases—to the main ingredients of the school timetable—the Framework is more to the point. English and mathematics are included in the core of essential subjects throughout the period of compulsory schooling (thereby endorsing present practice as recommended by the HMI's Secondary Survey). Neither maths nor English should occupy less than 10 per cent of school time. This is sensible, if uncontroversial.

The inclusion of science to 16 in the core raises obvious questions about staff. The implication is, presumably, that the first three years would be a broad course which could be taught by science graduates other than the scarce physicists and chemists. For the last two years, the DES favours "integrated science courses based on two or more of the specific science subjects": the time allocation of 10-20 per cent of school time indicates the importance attached to extending science education for all—and the lack of quali-



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A firm framework, but decently ragged round the edges

field teachers and laboratories to do this in the short-term.

For the rest, the framework is far from firm. Modern languages get a pat on the head, and should be offered to all. (But see Harry Rée on p.17) "Preparation for adult and working life" earns its own heading in recognition of spurious expectations but is very properly subsumed in "such areas as craft, design and technology; the arts, including music and drama; history and geography... moral education, health education, preparation for parenthood and an adult role in family life; careers education and vocational guidance; and preparation for a participatory role in adult society". At one stage or another, says the document, "all should find a place in the education of every pupil". Careers education and guidance should be provided "for all pupils, including the most able and those in the sixth form".

On these matters the framework gives no guide as to how much activity would be required to satisfy its general requirements. It places much weight on the concept of a balanced curriculum and, therefore, on the provision of options within a framework of alternatives which ensures

that the chosen programme covers enough of the field. This, as the secondary survey showed, is what most schools do already; this will be used to lever the rest into line.

This said, the strength of the document does not lie in the terms of the framework as it is propounded here but in the preliminary message it sends to LEAs and schools. This is that to carry out their responsibilities they must not only work out a curriculum policy but also collect information from the schools annually to monitor it and make sure that curriculum policy is matched by human and material resources. This demands a major role-change on the part of the local authorities—a change in curricular supervision which envisages much more active intervention by LEAs and their advisers (to complement the more active part which HMI is to play). Given present financial curbs, it is not clear how well prepared local authorities are to take this on. If it means anything, it must mean more rather than fewer expert advisers and administrators.

For their part, the Inspectorate's View of the Curriculum is a careful restatement of much which has come out of

other surveys. The primary school curriculum is commended: given more scrutiny it would be about right. They clearly do not favour any move to narrow the many field of vision or concentrate intensely on the basics.

At the secondary stage they are already in support of a coordinated attempt to achieve a standard curriculum. The Framework Points are meant to carry movement towards consensus beyond the Secondary Survey. They do not clarify the notion of the Core Curriculum—sometimes it seems to mean subjects (or areas) which must be covered all the way through the 11-16 compulsory period; at others it seems to mean essential subjects (or areas) to which access must be assured but not necessarily all through the five years; the table-making and syllabus building should provide a "balanced" combination of compulsory and optional subjects some of the options being more optional than others. Much virtue to a "balance" which begs a multitude of questions.

This history appears to side-line compulsory spheres in the final second years, but does not necessarily belong to a more essential category than geography. Nit-picking of this kind, of course, exactly what the search for consensus will mean if the argument about core is brought down from the lofty heights "areas of experience" to the "maple-chaps" which pupils have eventually encountered.

When all is said and done, however, what is now proposed is pretty much what can hardly be said to be unattainable. True, some of it is liberally mixed with the politician's brand of curricular hokum, but is this any worse than curriculum specialists' hokum peddled by academics and HMI? And by what explicit the requirement that curricula, planning and the provision of textbooks must go together, it is actually strengthened the hands of schools and those who provide professional leadership. If, in return, the Bill explains their curricular aims and priorities more clearly, this would be a desirable price to pay.

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Comment

Finniston points the way for engineers

The wretched performance of British industry over a long period of the recent and not recent past cannot be explained by any simple weakness. The sum of social attitudes which have come together to inhibit growth, adaptability and efficiency, can be seen most clearly in British (or at any rate, English) attitudes towards engineers and engineering. The Finniston report on the engineering profession is, therefore, a powerful indictment of modern industrial Britain.

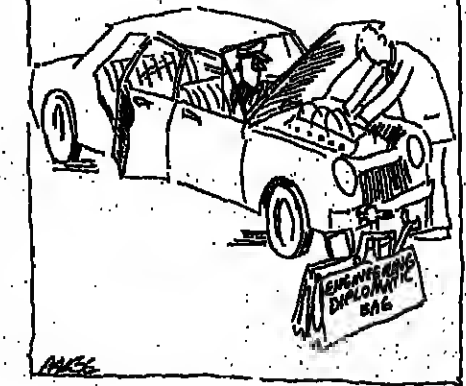
Finniston's brief only extends to engineering, but the analysis and remedies go far beyond engineering to wider aspects of education of secondary and post-secondary levels. The committee questioned the professional formation (they liked the Continental usage of *ingénieurs* in a range of overseas industrialised countries, and concluded that all of them—all our international competitors—had better systems of education and training for engineers than Britain has. This, they said, was in large measure because in Britain the universities looked after the initial "formation", and their ideas were dominated by an academic concern with scientific knowledge, while abroad more practical and down-to-earth consideration of technique provided the dominant ethos. They also blamed the imprudent attitudes of the engineering employers.)

There is, of course, something very familiar in this analysis: it is that very familiarity which makes it shameful, for the shortcomings of engineering education are not something now discovered for the first time; but part and parcel of the pattern of British higher education. They are systematic—the

logical outcome of structures which are well known; in a sense, they reflect the best, not the worst, aspects of the British academic scene.

To be clear, there are the easy, or quick ways of remedying all this. Engineers are poorly regarded—perhaps the Finniston criticisms could be seen as a justification of this. Law, regard as things now are—therefore they are not able well paid and so on. In positions of a large general responsibility, science and technology is taught in schools against a background of the present university expectation—and the present shortage of science teachers, and the lack of teachers with experience and training to relate their specialist teaching to engineering matters.

To do something at the school level would become a great deal easier if the committee's proposals for higher education courses and qualifications were carried out, and if there were a strong Engineering Authority in cut through the entrenched resistance of those who, in the quotation from Machiavelli which introduces the Committee's own summary of the report, "have done well under the old conditions". The recommendation to give engineers an extra £250 a year on top of the mandatory, means-tested, student grant will be hotly contested by many, not least the worthy groups. But it is worth a try: such a symbolic gesture would be crude and simplistic, but at least it would serve public notice in the next generation that some radical changes were afoot.



Locked in combat

In present circumstances, there can be nothing surprising in the story of now reports about disruption in schools where LEAs like Avon and Trafford have made staffing cuts in mid-year. The cut may be necessary to keep within reduced budgets, but nothing is going to make the NUT and the NAS cooperate. The pressure politics of teacher employment are now based on a kind of zero-sum game, no action, LEAs would take this as a green light for even bigger cuts. The LEAs and the teachers are equally responsible for the scandal of children sent home. Each will try to fasten blame on the other but neither is wholly culpable or wholly blameless: both are miserably locked in a self-destructing conflict.

It is, however, ironic that these widely reported incidents should take place just as the Clagg comparability exercise is entering its concluding stages. A few years ago Houghton sought to link the case, for higher salaries in an expression of professional obligation. It may well be that Clagg will do the same. Yet Renfrew forces local politicians and teachers to act out the cliché of industrial warfare in ways which wreck the teacher's professional credibility. Whom the gods wish to destroy...

A class of your own?

The first week of the first term of the 1980s has seen the publication of a clutch of papers which aim to bring the school curriculum more into line with the needs of children and society. They reflect the preoccupations of the 1970s, debate as to whether primary and

comprehensive schools were doing a good job in nurturing the potential of every child. But to predict whether specific departments, English and science will produce better Britain, it is advisable to turn back to the fifty years before that.

The results of the massive Nuffield mobility survey are also published this week and introduced in the TES (page 10). Professor Halsey, who analysed the survey, educational data. The overriding conclusion—conclusion of his *Origins and Destinies*, which was based on longitudinal studies of men living in England and Wales in 1972 who entered secondary schools roughly between 1920 and 1963, is that the efforts of educational policy through that period did little to improve equality of opportunity.

The 1944 Act, which was the main educational reform of the period, brought many rays of no reason, despite the abolition of primary school fees and "secondary education for all". Middle-class boys in the 1960s still three times as likely as working-class boys to get into selective secondary schools, exactly as they had been in the 1920s.

The survey data stop short of the widespread introduction of comprehensive schools, but Halsey does not expect the Clagg circular to lead any more effectively to the Butler Act towards equality of opportunity within the present class structure, especially if private schools continue to exist alongside comprehensives.

So what policies does Halsey's evidence give to the effectiveness of education policy in the 1980s? It rather depends whether it is still striving towards the meritocratic ideal of equality of opportunity he has assumed, or whether it may be that parents, employers and politicians who have prospered too long in English have conspired to set the sights on rather different goals.

No comment

Nothing said in this discussion paper is controversial as implying Government responsibility to the provision of additional resources. —From the HMI's A View of the Curriculum

NEWS

Avon and Trafford hardest hit in dispute over staffing cuts

Thousands sent home in timetable row

by Diane Spencer

Thousands of children were sent home from school this week at the beginning of term as teachers refused to operate new timetables introduced because of staffing cuts. Trafford in Greater Manchester, and Avon were the worst hit areas, but at least 14 other authorities were also affected.

In Trafford both the National Union of Teachers and the National Association of Schoolmasters' Union of Women Teachers are working to last term's timetable, and, with the Assistant Masters and Mistresses Association, are refusing to cover for absent colleagues.

The education authorities in Trafford and Avon have warned the unions that their pay will be docked as they are in breach of contract.

The timetable changes in Trafford had come from the council's decision to economize by axing the equivalent of 90 full-time teaching jobs. At one school 350 out of 400 pupils were sent home on the first day of term.

Mr Ray Holden, the North West's regional officer for the NAS/UNT, said: "Trafford was the same service with fewer personnel—they are leaving the service limp along and we are not prepared to be the crutch."

A NUT spokesman said teachers "cannot paper over the cracks in education caused by the cuts". The union was upset at the suggestion made by the authority, in a circular sent out before Christmas, that parents should be asked to help in supervising children.

The authority estimates that between 90 and 100 schools (out of 126) are affected by the action and potentially three-quarters of the school population of 40,000 children. In Avon the authority estimated that on far less than one-third of its secondary schools had been affected by union action.

Mr Chris Widdowson, a drama teacher at Hurdcliffe comprehensive school, Bristol, one of the worst affected in the area, said they had lost four teachers from the timetable. This had meant scattering

two first year classes among other first year groups. It was educationally disastrous to revise staffing quotas in the middle of the year, he said. Remedial and maths classes had doubled in size and a lot of teachers had to take subjects for which they were not qualified.

The NUT will be meeting the authority in Bristol today to discuss the loss of 300 jobs and other effects of the spending cuts.

The NUT intends to step up the action it began last term in Leicestershire, where 180 jobs are threatened members refused to take classes for absent colleagues because of the worsening teacher-pupil ratio. This term, starting on Monday, they hope other unions will support them.

In Sutton, NUT members are refusing to cover for absent colleagues and to take classes over an threatened. Members refused to approve a new, 10-15 min and Hillingdon similar action is being taken in protest over the authorities' refusal to provide supply teachers. No cover action continues

in Warwickshire, Surrey, Hestley, Bassetford, Harlow, Nechan and Buckinghamshire.

Warwickshire members of the NUT are threatening to strike in seven schools from Tuesday in protest at the authority's reprimand of one of their members.

The dispute arose last term when teachers of Milly Middle School, Nuneaton, sent children home one afternoon as part of a long-standing "open-cover" action as instructed by their union.

Mr Charles Hollnbeck, the head, who is also a local official of the NUT, refused to instruct his staff to continue lessons as normal after a formal request by the authority.

He was suspended for two days and reprimanded. The teachers had half a day's pay docked which they claim was unprecedented. The union wants the reprimand withdrawn and their members paid. The authority and the union met twice this week to try to resolve the deadlock. The NUT will call more schools out the following week if the matter is not settled.

Tug-of-war over the purse strings

by Sarah Bayliss

Financial implications of the new Education Bill have stirred old rivalries about who controls education spending—education officers or local government finance departments.

The profits, which closes in the Bill will make possible—on school meals, transport and special services provided by the bigger authorities—are already being jealously guarded by the education service in at least one northern authority.

In Leeds, Mr Patrick Crox, chairman of the education committee, has rebuffed a recommendation from the district's finance department that education profits be clawed back and pooled centrally, rather than offsetting education cuts.

"It would seem that anything we do to increase income they will try and grab centrally", Crox said. "I have said not on your nelly."

Clawback is nothing new in local government; the sale of school sites has brought cash to the central pools in the past.

However, the Education Bill seems to have created a big potential for creating new money at a time when all services are in need.

Mr Mark Carlisle, the Education Secretary and his minister Lady Young have said that increased income from school meals and transport should be used to blunt the impact of cuts in education and to improve educational standards. A strong minded committee chairman may be able to carry this philosophy through.

But there is a tide of feeling among officers, in particular, that this is not the way local government finance works.

Mr Noel Hepworth, the new director of the Chartered Institute of Public Finance and Accountancy, said it seemed most likely that increased income would be balanced by a corresponding reduction in rate and grant aid to the education budget.

Local authorities are corporate organizations running several services. They always look at distribution from a central point of view", he said.

Leads the potential new income—such as the increase in meal charges from April 1 if the Bill is through by then—has not been worked out yet "even unofficially". The number of children who would stop buying more expensive meals is another imponderable.

However, Mr Crox has indicated that what Fin could be raised on meals. He is adamant that such money should benefit the education service and no other.



It's fun, but does it do them any good?

Major rethink urged on nursery schooling

continued from page 1

and were less likely to be encouraged to generalize from their immediate experiences, they usually ended up with an effective and confident command of language. Attendance at a nursery school, which it had some special programmes made no difference to their language development.

The size of nursery classes meant that children could not have as much chance to play with adults as they did at home, where they had to learn to adapt to an adult. Parents had much clearer ideas of what they wanted their children to learn, and tried to equip them with specific skills. They insisted that children learn to complete tasks properly, while teachers believed that they must not interfere with the way children chose to do about their activities.

"Preschool education is dominated by this maturation view of providing a rich environment in which the child can browse. I believe that

Record jobless

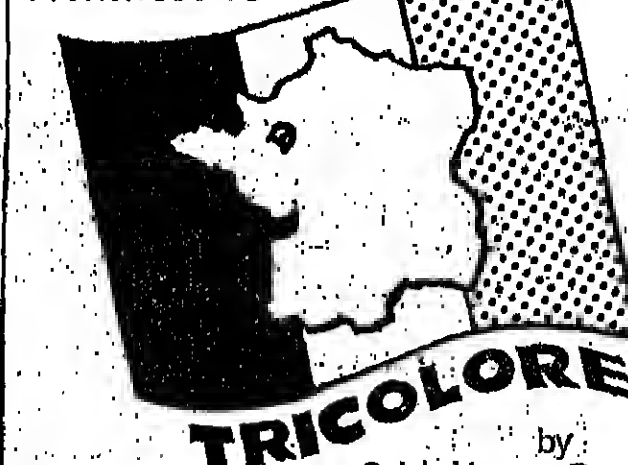
More teacher trainees will lose their jobs this year than at any other time since the rundown of colleges of education began, an official of the lecturers' union said this week.

Miles Jean Bonck, education secretary of the National Association of Teachers in Further and Higher Education said: "By this time next year there could be well over 1,000 known and registered unemployed college of education lecturers". —TES

Scholarships offered

The Stanley Hewett Memorial Fund is offering three scholarships of £250 each to student teachers and young teachers in the year beginning September 1980. Particulars and forms (stamped addressed envelope) from K. Baird, Twyford House, Colsterworth, Grantham, Lincs.

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by Sylvia Honnor, Ron Holt and Heather Mascie-Taylor

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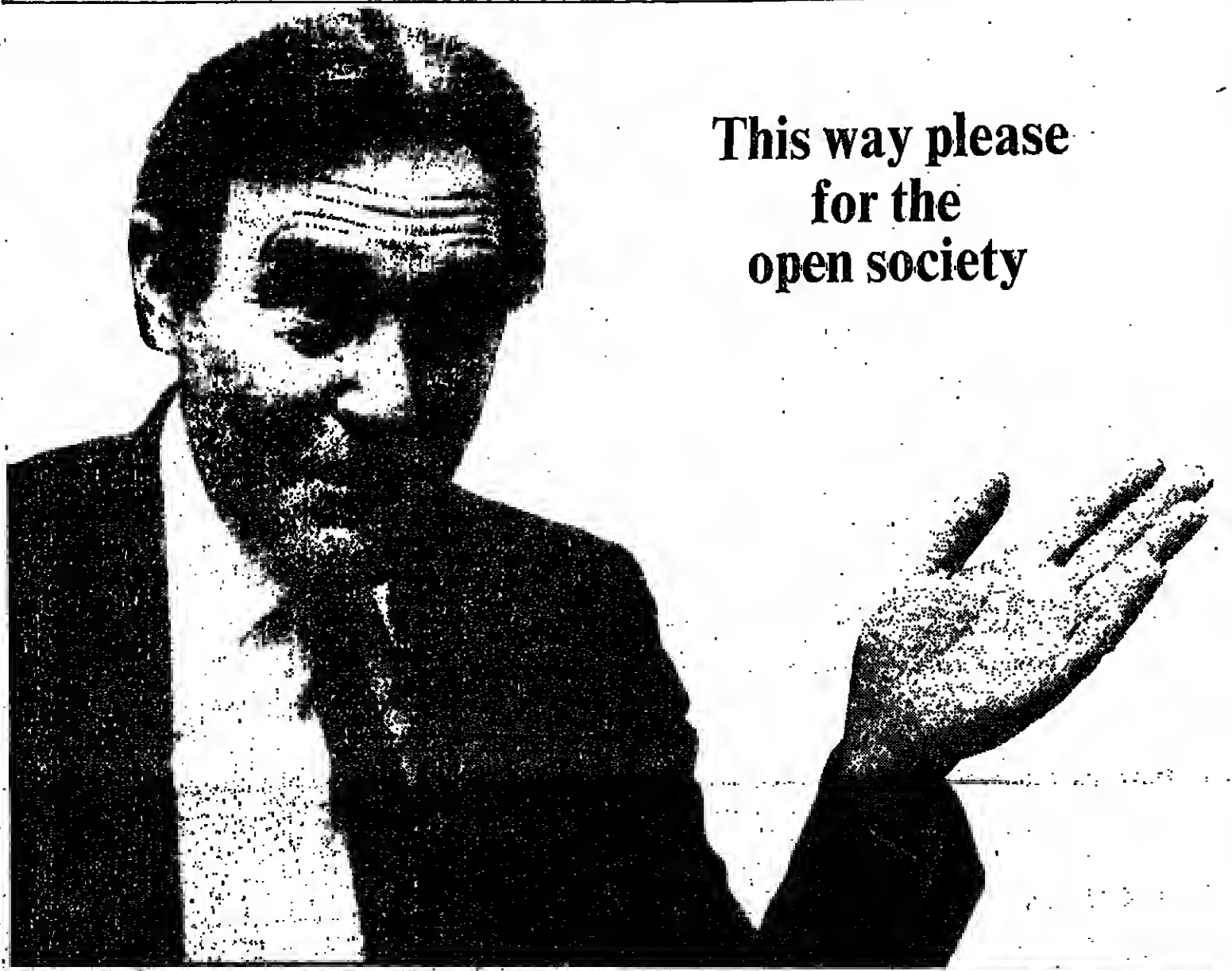
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Platform

A. H. Halsey, professor of social and administrative studies at Oxford, reviews his original research on social class and education, published this week in *Origins and Destinations*



This way please
for the
open society

A society may distribute its opportunities according to many different principles. Privilege is a familiar device and we retain it for the monarchy, the principle being that the first born has the right of inheritance. Some form of inheritance of 'ascription' has been the dominant traditional principle in the whole history of human society—that is, until the modern age of industrialism and equality.

But now ascription is morally on the defensive, assailed on every hand by the egalitarian protests and claims of class, region, and gender. Of course, the egalitarian impulse was always there in motivation the guilt and remorse of the privileged as well as the resentment and ambition of the disadvantaged. The rule of industrialism has been essentially that of a catalyst—providing both encouragement towards openness and resources for political redistribution of opportunity.

Industrialism requires, at least once, a more complex division of labour and a more mobile labour force. It gives opportunity to new skills, makes old ones obsolete, releases knowledge and its acquisition from familial and quasi-familial networks and above all generates the economic surplus which makes possible the pursuit of equal opportunities through governmental expansion. At the same time, however, industrialism, especially in capitalist countries of the West, Europe and Japan, generates a class system and it is the paradoxical nature of class to be once open and at the same time tending towards closure because parents seek to convert their own class advantage into enhanced opportunities for their own children.

Thus two moralities live side by side. All good parents wish to do their best for their own children; but all good citizens acknowledge

the fairness of equal chances for all children. In consequence, the family and the market are pitted against the state and the bureaucracy in struggles for scarce goods and services, each acting as the agent of principles which, in this case, are contradictory.

Modern educational systems can be thought of as, from one point of view, the instruments used by the state in a grand strategy of equalitarianism. The 1870, 1902 and 1944 Education Acts are stages in the development of that strategy. The underlying theory has been that life chances depend upon education, that education controlled by the state could overcome the inequalities of family, neighbourhood and class, and that education could be equalized by expansion. The application of this theory is essentially what my colleagues Anthony Henth and John Ridge and I have been exploring in our *Origins and Destinations*.

We were enabled to do so on the basis of our national survey on mobility at Oxford which gave us a sample of familial, educational and occupational biographies collected from 10,000 men in England and Wales in 1972. By the device of arranging these records of individuals in birth cohorts, we were able to reconstruct the experience of a cross-section of boys passing through the educational system as it developed from the First World War to the 1960s. We were, in effect, able to observe, in the natural

laboratory of the history of one country, how far a social and political theory of Victorian origin had turned out in practice.

British in this century, at least up to the 1960s, has been a country of continuing economic growth and social mobility. Against this background, we can ask the two questions which derive from the theory of equality through expansion and which refer to the principles of allocation. First, is there a movement towards equality of opportunity, and, secondly, is there a movement towards allocation by merit?

Illustrative answers are that the sons of the service class had more than three times the chances of a selective secondary education (private or state) in the 1960s, just as they had in the 1920s; and, making allowance for merit as measured (however contentiously) by IQ, the same chances for selective secondary education were more than two to one in both historical periods.

The answers to both questions can be not simply as negative. But the details are both complex and interesting. For example, the statutory raising of the school-leaving age to 15 in 1947 ensured the important equality for all of a 10-year schooling. At the same time this legislation, like the guarantee of secondary schooling after 1944 or the further raising of the leaving age to 16 in 1974, just as necessarily produces

an inequality between generations. Equalitarian legislation in a strategy of expansion cannot avoid the risk of a new 'steady state' is reached at the death of the last survivors of the reform. And incidentally it may be relevant to notice that a contracting future would produce the opposite effect. Moreover, legislation on the distribution of scarce goods is typically more of a confirmation of social trends than a socially equal benefactor. Thus in the period we have studied the service class set a pattern of increasing secondary schooling, following a path along an elongated S or logistic curve towards saturation (of approximately two-thirds) and the path was trued later by the intermediate and finally by the working class.

These patterns of expansion are accordingly complex in their effects on social equality. New opportunities such as free grammar schooling after 1944 or university places in the 1960s are seized initially more by the middle than by the working class. These oases to be a logic of logistic curves such that the hierarchy of classes is transformed by expansion into a moving target. The service class in the rear, passing points of consumption, or in this case, educational welfare, which had been reached by the more advantaged classes at an earlier point in history.

Macaulay, from the point of view of equality of chances in the labour market, 'the terms of competition move on. Indeed, it is useful, it still more complicated, to see education as an ordinary consumption good. Then a 'petition' for jobs on this view is determined by other position in this educational queue rather than by absolute amount of schooling or

qualification. In an far as education is a positional good and the class inequalities of de facto access to new and superior opportunities, class equality is no receding target.

On the other hand, the creation of 'cultural capital', in use a metaphor much favoured by Pierre Bourdieu, a massive fact of modern educational history. Our analysis has not led us to accept any general claim for Bourdieu's thesis that modern capitalist countries, where capital is the means of reproducing the social classes. Of course education provides mechanisms for families to pass on their advantage. But accumulation and discrimination are at least as notable a feature of educational expansion. In Britain at least there has been much upward intergenerational educational mobility and the overriding feature of the state school system throughout our period has been the presence in them of a dominant element of first generation grammar and technical school leavers. We have tracked the use of widening here by comparing the real world with a world in which schooling is allocated, exclusively on meritocratic grounds. For the purposes of analysis and argument we have accepted IQ as the measure of merit and estimated its distribution. We have then compared the real world of distribution of schools and colleges with the hypothetical world of a meritocratic system.

It is important to emphasize here that, without rehearsing all the objections to the assumption that class in no way affects merit, IQ, our assessment of the gap between reality and merit is biased, i.e. it is biased in an underestimation. Yet we find that at each stage from primary to secondary to post-secondary education and at each historical stage the expansion of secondary, or higher education, merit is measured by class discrimination.

In short, the journey towards a meritocratic society is a long one. For the time being, the two principles seem to be in all societies so that the gap between reality and merit is as much as the competition. The gap between reality and merit is as much as the competition. The gap between reality and merit is as much as the competition.

Origins and Destinations, Clarendon Press, £11 hard cover, £4.95 paperback. The book will shortly be reviewed in the TES by Prof. Donald Macrae of the LSE.

NEWS

Primary ban on rising fives

by Sarah Bayliss

Primary schools just outside the London Borough of Ealing can expect a wave of "rising fives" knocking on their doors at the beginning of term.

The children and their parents will be looking for refuge under a ban on rising five admissions, introduced by Ealing's Conservative-controlled council at its last meeting on November 27.

The Ealing ban, which took effect from January 1, is expected to save £285,000 and is part of a wider cut package. Nursery classes, mainly for high priority children, will not be affected.

An Ealing council spokesman said there were 3,000 rising fives in the borough's primary schools last summer term.

For parents expecting their child to start their education in the new year, the ban has come as a surprise.

Neighbouring authorities such as Brent and Hounslow—both Labour controlled—will be hurriedly assessing the possible impact on their schools.

In Hounslow, three primary schools close to Ealing have traditionally taken a handful of children from across the boundary—and Ealing has paid for them.

Mr Mike Nicholls, chairman of Hounslow's Education Committee, is expecting more parents to opt for the Hounslow schools; but his committee must decide on the legality and desirability of ratepayers supporting Ealing schoolchildren.

Hounslow will be particularly attractive to Ealing parents since it already takes 50 per cent of three-year-olds and all those four-year-olds who want to start school early.

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Russian offensive on Thatcher cuts

by Kenneth Shaw

A Soviet journal has made a scathing attack on the Government's education cuts.

The journal, *Sovetskaya Pedagogika*, asserts that after a long period of discrimination against working class children in education, followed by a massive increase in the efforts of the left wing of the Labour Party, in providing better chances for these children, Britain is now showing anti-democratic tendencies in its school policy.

Since taking office in 1979, the report states, Mrs Thatcher's Administration has decided on further reductions in spending on the social needs of a wide range of the population, including that on education.

The report contrasts the £10,500m allocated to "social needs" by the Labour Government with the £6,000m by Mrs Thatcher, and later in the article the writer says that Britain spends £8,500m on the military-industrial complex supporting NATO.

British Government figures, however, say the education allocation under Labour was £9,657m, cut to £9,246m by Mrs Thatcher. Under her Government, spending as a whole (including National Insurance) has risen from £7,824m to £8,062m.

Social services' spending has risen under the Conservatives to £19,289m from £19,058m.

Intact on changing the law on education, the report goes on, the Conservative Government is supporting the privileges of the ruling class in education by seeking to preserve the private schools through the greater financial aid. Grammar schools, too, are being strengthened—and these measures seen as designed for the children of the wealthy middle class.

The report quotes Mr Mark Carlisle, as saying: "Reducing Labour Party law on the comprehensive school will eliminate the threat to freedom." To which the Soviet journal replies: "What freedom is threatened by the education of the broad masses of the nation it is not difficult to imagine."

Personal column

John Rae

Strong, astute confident

I want to use two columns to review the position of the independent schools in the 1970s and 1980s. I hope readers will not regard this as an overstatement or irrelevance. Whether society likes it or not the independent schools will continue to exert an important influence. Yet, as they will appear havens of civilized learning and behaviour monasteries in an increasingly dark age; to others a source of division and in the end of its class-consciousness. Nothing could be further from the truth than that in the 1980s the independent schools can be safely ignored.

But first the 1970s. On January 1, 1970 Harold Wilson's Labour Government was still in power. The Public Schools Conference (PSC) in 1969, about to produce its second report on the independent and direct grant boarding schools. Its first report on the boarding schools had been buried as quietly as a victim of the plague. What the second report was published in 1970 recommended the abolition of the direct grant. The Labour Party welcomed this but lost office too soon to take the necessary action.

In Opposition Labour reconsidered its position on the independent schools. Until then it had been inclined to accept the lead of the social democrats and favours some form of integration. The failure of the Public Schools Commission to come up with a credible scheme, made the party turn to abolition, at least as their long term goal. The new policy was hammered out by the Education Committee of the National Executive of the Schools' Association. Its spokesman was Roy Hattersley. In September 1973, he told the schools that it was now this party's serious intention initially to abolish the direct grant and eventually to abolish private education in this country.

The independent schools were shocked; but Hattersley had done them a good turn. The press was unanimous in condemning the proposal. In a three-part television debate on the question of abolition, Hattersley came off worst. The case for independent schools was given a helpful boost. So was the schools' own awareness of the value of cooperating with the State.

The Independent Schools Information Service had been started

dared to break through the £1,000 a year barrier. In the early 1980s they will break through the £3,000 a year barrier. In January 1979, it was the day schools, which broke through the £1,000 barrier.

High fees and falling rolls in the secondary age group increased the competition for pupils. Though some schools went fishing in the foreign market, the majority did not and the proportion of foreign pupils in all independent schools—just under 5 per cent—remains low and hardly indicates a desperate search for business. But the boys' schools' decision to open their sixth forms to girls did cause friction within the independent sector. The headmasters were convinced that it was being done for economic reasons; the headmistresses spoke rather unconvincedly about educational experiment.

Neither side was inclined to say publicly that there might be another reason. In a 1971 policy statement, the boys' public schools had observed rather tactlessly: "Sixth form provision for girls in particular is not infrequently inadequate and boys' schools might help by taking girls at that stage." The headmasters were happy to oblige.

The recently found harmony in the headmasters' ranks may not have aided for economic reasons but it is clear that economic arguments will prevent them ever turning the clock back. There were in 1979, 9,000 girls in HMC schools. In the last year the number of girls in girls' schools has proved remarkably resilient though their own attempts to attract boys into their sixth forms have not been successful.

When the Conservatives won the 1979 election, the independent schools were stronger, more publically astute and less publicly criticized than at any time since the war. It was true that there were some disagreements about the new Government's assisted places scheme but the disagreements were small and could probably be ignored. As the 1980s began, the independent schools looked forward to the future with confidence; with any luck there would be a Tory Government throughout the decade. And it is with the prospect for the 1980s that I shall deal in a fortnight's time.

Meccano shut-down causes O level crisis

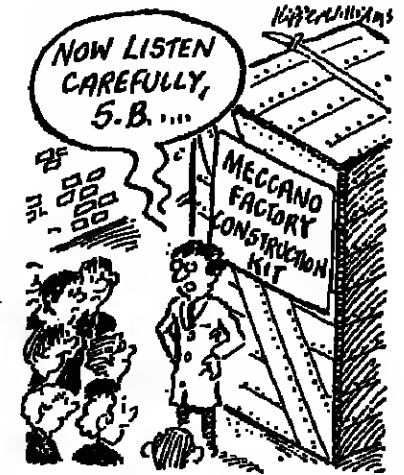
by Bert Lodge

An O level course in up to 500 schools is threatened by the shut-down of the Meccano factory in Liverpool.

The course, control technology, relies heavily on a £140 kit supplied by Meccano and which is sufficient for 15 pupils. A supplementary kit costing £100 is also available. But Airfix Industries, the parent company, closed the Meccano plant 30, blaming financial problems and poor productivity. Some of the 930 workers made redundant have since occupied the factory though no production is being attempted.

Mr Geoffrey Shillito, director of the National Centre for School Technology at Trent Polytechnic, said this week that schools that already have the kit would not be greatly affected yet, although each year at Meccano paid each year.

"The plots and small parts make it particularly valuable. Linters motion, switching, structures can



Oxford Conference in Education

Schools broadcasts to be reviewed

by Richard Garner

The pattern of BBC broadcasts for schools is to be reviewed, Mr Alasdair Milne, managing director of BBC Television, told the Oxford Conference in Education last week.

Mr Milne, speaking at the conference held at St Catherine's College, Oxford, said: "We are surely going to have to look at our pattern of programmes for schools—probably not at primary level because all content seems fairly well matched to current educational practice. At secondary level, although many schools have gone in for recording off-air for replay when they can organize their own things, there has been less satisfaction over the years."

The BBC, he said, would have to talk about rationalizing the Open University output and BBC 2 while they were renegotiating their contract with the university.

In future, radio time may also have to be given up with students relying more on cassettes or other learning materials.

Mr Milne believed the Independent Broadcasting Authority should make equal time available to the Open University.

The creation of a fourth television channel would mean the 5 pm to 7 pm Open University slot on BBC-2 would be needed for general programmes before TV-2 started.

Last year, Mr Milne said, the BBC spent £12.5m on education—£7m of which went on schools broadcasting and just under £5m on Continuing Education.

He added: "The broadcasting costs of the Open University (paid for, as I said, by the Department of Education and Science) were £4.8m."

Appeal to heads on cuts

Headteachers may be tempted to sacrifice the needs of educationally disadvantaged children first as they strive to cope with cuts in spending and falling rolls, Miss Margaret Green, Schools Director of the National Union of Teachers, said today.

She added: "It will be all too easy when staffing cuts are forced upon schools for the already disadvantaged to be even further disadvantaged."

"It will be tempting—under circumstances of falling rolls, financial cuts, and the pressures of an often crude public debate on educational standards—for heads to reduce provision or courses specially suited to minority ethnic groups or girls and to neglect to maintain and protect more prestigious academic examination courses."

NUT steps up opposition to unqualified teaching for 16-19s

Strong opposition to allowing untrained teachers to instruct 16-19s in schools is reiterated by the National Union of Teachers today in a discussion document on the education and training of this age group.

But the document does recommend that, in addition to their usual curriculum, schools should organize specific vocational courses normally only provided in further education or tertiary colleges. Further education teachers do not need teaching qualifications.

Recognizing the problems arising from the education of the age group in schools, and further education colleges, the union says it is "convinced that agreement on all issues relating to the mobility of teaching staff can be reached after suitable consultations with the teachers' associations involved."

The report's reason why school students should not go to a nearby FE college for some subjects and vice versa. It rejects any suggestion that a nationwide 16-19s should be educated only in tertiary, FE or sixth form colleges.

The report says that, in order to involve more 16-19s in education, i.e., Industrial Training Boards, the Manpower Services Commission and other agencies must "mount a systematic assault on all the impediments—national, institutional and financial—that conspire to prevent young people from obtaining access to education."

The union calls for day release for all 16-19s, and six weeks' paid leave a year for those 16-19s who attend vocational courses. Education and training for the 16-19 age group: a discussion document. NUT, Hamilton House, Mabledon Place, London WC1.

Class of Origin	Allocation to Selective Schools		(a) by merit, (b) in reality	
	1913-22	1923-32	1933-42	1943-52
Service Class	52.8/69.7	60.4/76.7	62.0/79.3	85.3/94.4
Intermediate Class	33.5/34.9	40.7/44.0	42.3/43.3	35.3/37.1
Working Class	28.8/20.2	30.1/26.1	31.6/27.1	25.8/21.6

a—the percentage of each origin class who would have had selective secondary schooling out of merit

b—the actual percentage from each origin class who received selective secondary education

مكتبة الأصل

NEWS

A production line for the lost British engineer?

Main recommendations:

- Universities should give ultimate authority over their engineering courses to a new body, the Engineering Authority, responsible for scrutiny and accreditation of two new degrees, BEng and MEng. Universities failing the authority validation should lose the right to award degrees and forfeit special funds earmarked for engineering education. The authority should have powers of accreditation over employers and oversee generally the interests of the profession throughout industry.
- Three new ranks of engineer should be created.
- Experienced engineers should be recruited by university and polytechnic departments.
- Special funds should be earmarked for departments of engineering in universities and polytechnics. Polytechnics should be able to establish engineering courses independently of local government control.
- An additional £250-a-year bursary should be given to students on accredited engineering courses.
- Greater emphasis should be given to industry and technology in teacher training courses.
- Teachers should take short secondments in industry.

by Bert Lodge

Harsh criticism of schools for the quality of their maths and physics teaching, and a strong call for central control over the education of engineers, are among the main points made by the Finniston Report published this week.

The report also criticizes universities for their admission policies and for the unsuitability of most of their first-degree engineering courses, and employers for failing their obligations towards young graduates.

All Britain's multi-overses competitors do a better job of training engineers, the report concludes. Moreover, the relations between industry and education are welcome as far as to improve engineering education, but the "enhanced" courses scheme begun this year at a few universities and polytechnics and at which specially selected students receive an extra £500 a year.

The cost of implementing the proposals is put at £40m. Indications from the committee that it expects the industry to foot the bill have already drawn protests and indicated a factor to the Times on January 4 from the Institution of Civil Engineers.

Set up two years ago under the chairmanship of Sir Monty Finniston to find ways of recruiting and training the best talent for Britain's manufacturing industry, the 15-member committee has made inspection visits here and overseas, held open meetings up and down the country and considered over 700 submissions of evidence.

Schools

"The criticism repeated most frequently in the evidence to us concerned the standards attained by school leavers in mathematics and physics," the report says. From the Committee of the Engineering Professors' Conference there were complaints of "varying and often inadequate standards... which make the subsequent teaching of the basic principles of engineering much more difficult."

Acknowledging this to be the result of not enough qualified maths and science teachers, it goes on: "We received evidence to the effect that these shortages have

been felt more acutely in England and Wales because of wider distribution of able children among establishments since the move to comprehensive secondary education. The report complains that the problem is exacerbated by a wide range of entry routes to A level: "There are over 50 different A level maths syllabi. It hopes that the Cockcroft Committee, currently inquiring into the teaching of maths, will recommend specific action towards an effort to improve maths in schools. The same should go for science, especially physics."

Criticism is also made of the level of communicative skills of engineering students and their narrowness of outlook. The study of, say, economics or a foreign language is recommended during their senior school years.

The report calls for extra funding for the Science and Technological Regional Organisations which bring together educationalists and industrialists at local level. It would like to see every company developing links with at least one local school.

More teacher fellowship schemes like those run by the Institution of Mechanical Engineers and of Electrical Engineers are called for to expand teachers' experience of engineering industries.

University entrants

While acknowledging that United Kingdom engineering courses attract a good proportion of good A level holders, the committee is concerned that the long "tail" of candidates with relatively poor examination results "has depressed the academic standards of the engineering student population."

The report, submitted this year, notes that the number of engineering places in the late 1960s and early 1970s faster than able students came forward to fill them. This led to admitting more overseas applicants or filling up from the UCCA clearing house each September.

Noting that some of the professional institutions have attempted to raise standards by asking for higher academic performance, either at A or degree level, the report points out that this is no solution to the problem of improving recruitment to engineering.

There is a danger that potential engineering students would be deterred by higher institutional

The Finniston report



- Careers advisers should know more about engineering.
- Maths and physics teaching must be improved.
- Every secondary school should be involved in a schools-industry scheme and every firm linked with at least one local school.

by Bert Lodge

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tion of practical problems based upon engineering systems and processes.

After the degree the REng graduate will move on to the E3 and E4 stages of his formation. This is likely to last less than two years. E3 will be a structured introduction to industry under supervision and involving a range of practical assignments; E4 will amount to specific preparation for a responsible post and a period of carrying responsibility in that post under decreasingly close supervision.

● The route to Registered Engineer (REng) (Dip). Only one in four engineers are likely to qualify for this elite title. The main route would be through an academic route to a Bachelor of Engineering (BEng) degree. This would consist of a first year as a common course with BEng entrants at the end of which selection would take place. The course would require a further three years and would encompass the engineering application phases E3 and E4 in the BEng.

The MEng graduate would have to demonstrate he had satisfied the training and experience requirements of E3 and E4 in order to obtain REng(Dip). This would take about two years, adding six years in all, comparable in length with continental Diploma courses.

To develop the BEng and MEng courses, teaching contracts should be placed with selected university and polytechnic departments for course development.

● Route to Registered Associate Engineer (REng(Asoc)). A qualification for those engineers who will work mainly in support roles. The academic part of this formation will be based upon the TEC qualifications of Higher Certificate and Higher Diploma and a modified form of the current E3 in engineering subjects. The main stream will usually have studied part time and will have accumulated considerable practical experience, usually equivalent to the E3 and E4. They will have to satisfy the authority on their total experience as a qualification for this level of practice.

The report emphasizes "to maintain standards of qualification in these three levels we recommend a system of statutory regulation of these formation qualifications based upon the accreditation and assessment of the formation passages, to be carried out by a new statutory Engineering Authority."

"We consider it important that the academic awards leading to these statutory qualifications be clearly distinguished from other clearly distinguished from other awards or science degrees. We therefore urge upon university and polytechnic governing bodies that the degree titles that they give for engineering courses accredited to BEng or MEng are amended accordingly — and that those titles."

The committee considered arguments for having special funding arrangements for engineering education but rejected them in view of the difficulty in separating the discipline from others in higher education.

"Nevertheless we see a need for reform... to ensure the implementation of our proposals... and we recommend the specific immediate and long-term funding earmarking of extra funds, via tranches from the University Grants Committee, and equally effective measures for the maintained sector to accredited engineering departments."

Further: "We recommend that courses which fail to get or lose their accreditation should no longer be eligible for earmarked funds. If polytechnics are also to get earmarked funds, as the report recommends, the question of their particular form of government is raised."

Funding

The report emphasizes: "For polytechnics to be able to respond to the need of the engineering discipline and to mount the new formation packages they must be in a position to take action without having to await approval from a hierarchy of external committees."

The committee estimates the cost of its proposals at £15m to £40m a year, against a current cost of engineering education of about £200m a year. "In our view the extra expenditure is modest when set against the likely national returns. Notwithstanding the current reluctance on public expenditure, this price must not and cannot be budged."

Report of the Committee of Inquiry into the Engineering Profession. Cma 7794 HMSO £5.00.

At the same time to encourage continued on next page

NEWS

Association of Science Education annual meeting

Big surplus of science staff expected

by Bob Doe

The present shortage of science teachers could be reversed as dramatically in the next 10 years that the retirement age may have to be dropped to 55 or less to get rid of the surplus. This is the startling implication of figures presented at the annual meeting of the Association for Science Education by Dr Joff Kirkham, science adviser for Leicestershire.

Figures obtained from the Department of Education and Science by Dr Kirkham show schools short of 1,150 biology, 1,050 chemistry teachers and 2,400 physics teachers. The total number of qualified science teachers in secondary schools in England and Wales is 36,000.

But there is pressure for more science to be taught to more pupils as part of a common core. One suggestion is that on average pupils should spend about one sixth of their time doing science up to the age of 16.

With an average staffing ratio of 18:1, this means that in 1981, with

3,700,000 children in secondary schools, 34,260 science teachers will be needed, and 2,200 more for sixth form work. By 1981, therefore, 42,000 science teachers would be needed, although as Dr Kirkham says it is unlikely that 6,000 extra can be found in time.

By 1992, however, the numbers of pupils will fall to 2,850,000 and only about 28,500 science teachers will be needed. That will be 7,500 fewer than the present numbers.

According to Dr Kirkham, the age structure of the profession is such that natural wastage is unlikely to resolve this, particularly as a higher proportion of science teachers than other teachers are aged less than 34. If the situation stabilizes, by 1992 the equivalent of every science teacher at present aged 40 or more will have to be retired to keep to the numbers required.

At present science teacher numbers are increasing in number at the rate of 800 a year, in spite of the loss of 1,000 a year to other jobs, retirement or maternity. The largest growth is in biology teachers, and one danger is that as the pressures to shed staff increase, physics teachers—whom are best able to find jobs elsewhere—will be the first to go, exacerbating still further the acute shortages in that subject.

Because of the comparatively young age at which many science teachers are promoted to heads of department or school posts, there will be considerable frustration for those just behind them, Dr Kirkham told the conference.

Teachers should be paid more to overcome the serious shortage of science teachers, Sir Norman Lindop, Director of Hatfield Polytechnic, told the ASE. "Is it too much to ask to offer some financial inducement for science teaching?" he said.

Teachers in general should get more. Salaries in the profession were no longer competitive. But in return they would have to accept the need for professional standards and conduct. These included a reduction in the variety of forms of teacher training and the setting up of a national teachers council.

Sir Norman predicted a contraction in the number of higher education. The proportion going on to higher education just because they had the necessary qualifications would go down.

Higher education might come in many more than at present, but not along the lines of the existing pattern. Conventional college and university education would shrink, but he suggested there might be an increase in the numbers of adults coming into higher education.

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Boyson warning on university student militants

by Richard Garner

Dr Rhodes Boyson, Under Secretary for Education, has warned that militant behaviour by students may threaten the future of Britain's universities.

Speaking at the National Union of Students' universities' conference in Coventry at the weekend, he said: "The future of universities and the level of student support will in the long, and even the short run, depend upon the respect with which they are held by the general public."

"Every unpleasant demonstration, every sit-in disturbing student studies and administrative action, every objectionable incident, every wild exaggeration of a student leader will inevitably damage not only the image and interests of hundreds of thousands of students who work conscientiously day by day but also the standing of universities themselves."

Later the students passed overwhelmingly a resolution urging that all lecturers should attend compulsory training courses in teaching skills when they arrive on the campus.



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The theme of the Observer-Copydex Children's Collage Competition will be announced in the

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NEWS

The packaged curriculum

Specific proposals for a core curriculum are set out in the Government's latest consultative document. Simultaneously, HMI have backed plans for a framework. Bob Doe examines both reports

English and maths take priority

All pupils should spend at least 10 per cent of their time learning mathematics and English, Mr Mark Carlisle, the Education Secretary, says in *A Framework for the School Curriculum*, published this week. Science education should start in primary schools, and it should take up 10 to 20 per cent of secondary school time.

A further 10 per cent should be devoted to studying a foreign language for at least two or three years, though more than 20 per cent of his time to languages at any stage of compulsory schooling.

The common core should also include religious education, physical education and careers guidance for all, begun not later than the third year of the secondary school.

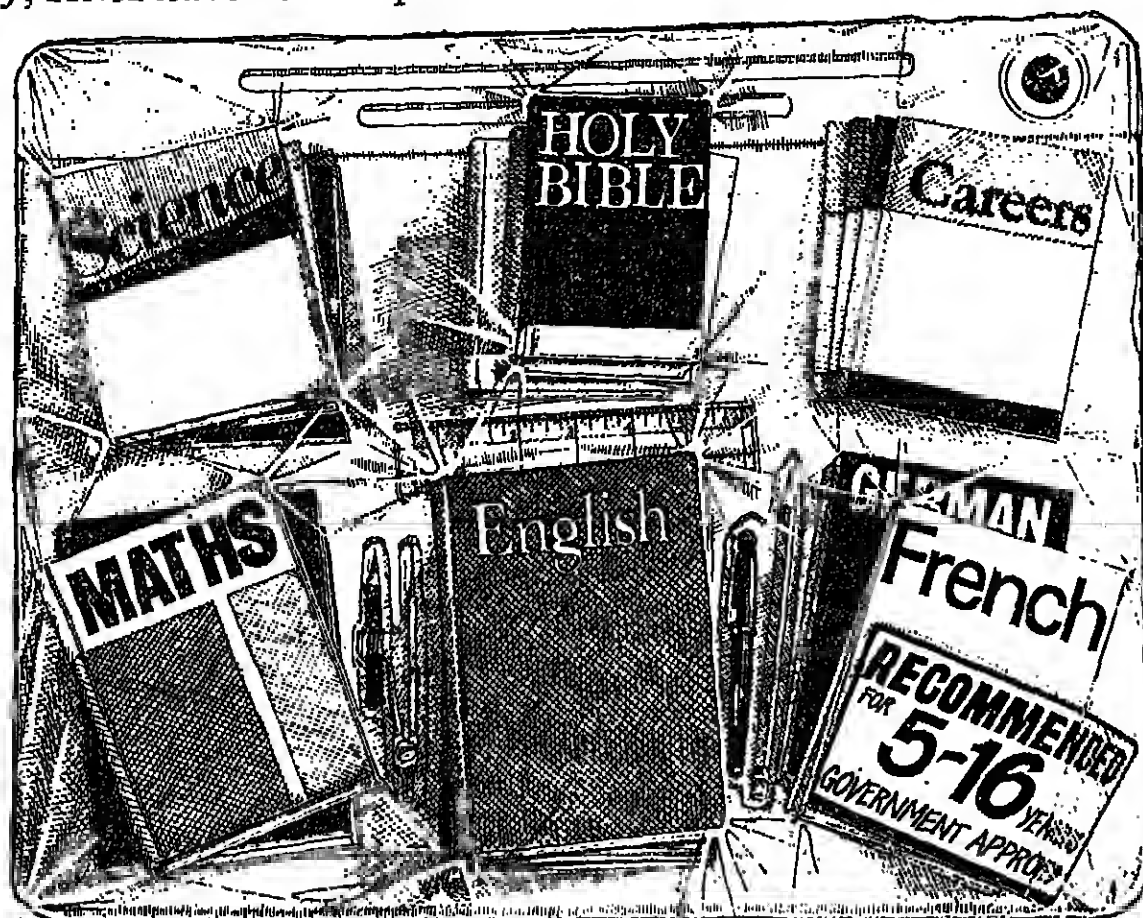
The Education Secretary repeats the assertion that it is not the Government's intention to lay down in detail what and how schools should teach; but it had "an inescapable duty to set a framework for the work of schools to meet national needs".

This consultative document says the curriculum should not be static or uniform throughout the country. But the diversity of practice revealed by the HMI primary and secondary surveys "makes it timely to provide guidance on the place of certain key elements of the curriculum should have in the experience of every pupil during the compulsory period of education".

It claims a "good deal of support" for the idea of a core of essentials followed by all pupils according to their ability. This would ensure that every pupil at least got sufficient grounding in the knowledge and skills which by common consent should form part of the equipment of the educated adult.

That said, however, the proposals confine themselves to questions when it comes to the details of such a plan. "Should the core be defined as narrowly as possible so that it covers a large part of the individual's curriculum? Should it be expressed in terms of traditional school subjects or in terms of educational objectives?"

English and maths should form part of every pupil's core throughout the whole period of compulsory education. These subjects were essential both in their own right and because of their importance for many other parts of the curriculum.



world in which they live, and the interdependence of individuals, groups and nations. To help pupils appreciate human achievements and aspirations. These are put forward as a indication of "the values against which any substantial element of a school curriculum may be judged should be found within it". A Framework for the School Curriculum; free from HES, Elmfield House, York Road, London SE1 7PE.

Yes, spell it out say inspectors

There is an urgent need to spell out more precisely what every child should learn, according to Her Majesty's Inspectors. In their view the curriculum, the response to the Government's plan for a framework for the curriculum, should be a list of what every child should learn, not a list of what every child should do.

Primary schools, says the inspectors, have not the balance almost right. "It is only the provision of observational and eyes on the curriculum that is needed to bring many primary schools and the teaching of French that sometimes attempted when conditions are not suitable."

The first of 14 points or "propositions" relating to the curriculum, make clear the HMI view that there is a case for a common core of framework. "There is a need to give a clear and much more explicit consensus nationally on what constitutes the core of secondary education at the age of 16. There is a need to set out more explicitly what secondary education is to be for the pupils and to enable them to do so themselves."

Within the education system, which there should be compared with other systems, the inspectors say that the curriculum and the way it is taught should be compared with other systems, the inspectors say that the curriculum and the way it is taught should be compared with other systems.

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NEWS

From previous page

has increasing practical value as our links with Europe and the rest of the world are strengthened. More languages, teachers were needed and more in-service training so that teachers could grapple with the needs of a wider range of pupils. Considerable rethinking of courses was needed for those unlikely to continue their languages for the full five years.

Arts and crafts

No pupils' programme should be wholly deficient in the arts and applied crafts. There were various ways of providing aesthetic and creative experience through music, drama, art or crafts, and for designing and making through craft design and technology, or through home economics or needlework. While they were all different, they had some valuable features in common, and all pupils should be able to select from among these.

Social education

Rather more difficult decisions arise in relation to social and political education. Schools quite commonly offer a choice from history, geography, economics or some form of social or environmental studies and there clearly are some overlapping interests and skills which pupils could be expected to derive from them.

It is questionable whether, in view of the way these subjects have developed over recent years, young people will derive enough of what they need to know from a choice of only one of them.

History

There is in particular a strong case for maintaining some study of history in the final secondary years. A proper appreciation of the culture and traditions of this country, and of rights and responsibilities in a democratic community, requires some historical perspective.

Many of the ideas with which pupils may engage through history, and the nature of the evidence they may need to assess, require a maturity of thought which few children have attained by the age of 14 when many of them at present drop history.

Personal development

Religious education, the study of personal relationships, moral education, health education, community studies and community service could all contribute to personal and social development. Careers education, work experience and a long tradition to the environmental, economic and political consequences of adults were also important, though these and other aspects of general education would not necessarily appear as specific items on the curriculum.

A curriculum with a large common element did not mean there would be no room for choice. Options would provide the necessary opportunities for new or additional subjects or give time to extend compulsory subjects.

Within such a framework some vocational interest can be introduced either in the form of optional subjects—commerce for example—or as an extension of compulsory subjects into studies involving more specific applications. For example, technology might appear here either as a course in its own right or as an extension of science or craft.

Primary

Anxiety is sometimes expressed that maintaining a wide curriculum in primary schools may be possible only at the expense of the essential elementary skills of reading, writing and mathematics. Greater evidence from the HMI survey of primary education in England does not bear out that anxiety. A broad curriculum can include many opportunities for the application and practice of the skills of writing, reading and calculating.

More discussion is needed on the levels to which work should be taken by some children in various parts of the curriculum, the inspectors say. This is in line with the primary survey, which found that some children were not being sufficiently stretched. Greater attention should also be given to ensuring the continuity of learning between one class or school and the next.

A view of the curriculum HMI surveys offers intellectual stimulation and cultural benefit. It now asks for discussion No 11 HMSO price £1.50.

Sex Differentiation and Schooling Conference, Cambridge

Impractical girls just lack confidence

by Biddy Passmore

A lack of confidence on the part of many girls explains the superior achievement of boys in maths and science, Dr Elizabeth Fennema of the University of Wisconsin told a Cambridge conference on sex differentiation and schooling last week.

Dr Fennema, who has spent many years researching into sex differentiation and the learning of mathematics, said that she no longer thought there was a direct relationship between visual-spatial skills (the ability to solve problems involving an understanding of shapes and structures) and mathematical ability. This is the superior performance of girls in visual-spatial tests did not account for their underachievement in maths, as was commonly held, she said.

Her theory means that there is no biological difference between boys and girls which would make boys better at maths. It underlines years of assumptions about the different achievement of boys and girls in maths and science subjects.

She concluded that teachers must persuade both boys and girls that girls should study mathematics. Lack of confidence means that for fewer girls opt to take mathematics in senior classes. Since they are taught less, they learn less.

Dr Fennema was speaking at Sex Differentiation and Schooling, a conference organized by Mr Michael Marland, the new head of the ILA experimental North Westminster School.

Dr Fennema agreed with previous research that girls start to fall behind in mathematics at about the same time as they start to fall behind in visual-spatial tests at the beginning of secondary school.

But, she says, this is accidental: performance in a subject appears to be related to confidence and there is evidence that children are more confident in those subjects which they consider appropriate and useful to their sex. Mathematics had long been considered a male domain—especially by boys—and this assumption seems to be transmitted to girls from an early age.

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Even when they do take mathematics, girls tend to get a far smaller share of the teacher's time. Throughout school, boys—especially noisy, high-ability boys—get a disproportionate share of the teacher's attention, thus reinforcing the already harmful effect of sexual stereotypes on girls' achievement.

Her findings, based on research in Madison, Wisconsin, were supported by British speakers from the floor.

Dr Fennema was one of four North American academics, flown over to address the conference, who have been looking at why girls perform better than boys during their primary years—but then fall behind.

Dr Carol Jacklin, author with Eleanor Maccoby of the influential study *The Psychology of Sex Differences*, studied the careers of 200 children from birth to the start of school. She concluded that when they arrived at school boys tended to be more demanding, while girls were quieter and more compliant. Boys tended to be more

initially played in larger groups than girls. But, she emphasized, there were greater differences within each sex than between them.

Ms Carol Dweck of the University of Illinois explained the achievement of girls in terms of her concept of "learned helplessness", which made girls underestimate their ability, and gave them less confidence to tackle new tasks and concepts.

Learned helplessness was caused by the different patterns of praise and criticism given to the two sexes from teachers. Girls and boys received the same amount of criticism, but girls were clearly always criticized on intellectual grounds, while boys were criticized on the time on non-intellectual aspects such as effort or presentation.

This difference in treatment led girls to attribute their failure to lack of ability whereas boys blamed failure on lack of effort or on the unfairness of their task. This encouraged boys to think that they can do better with more effort.

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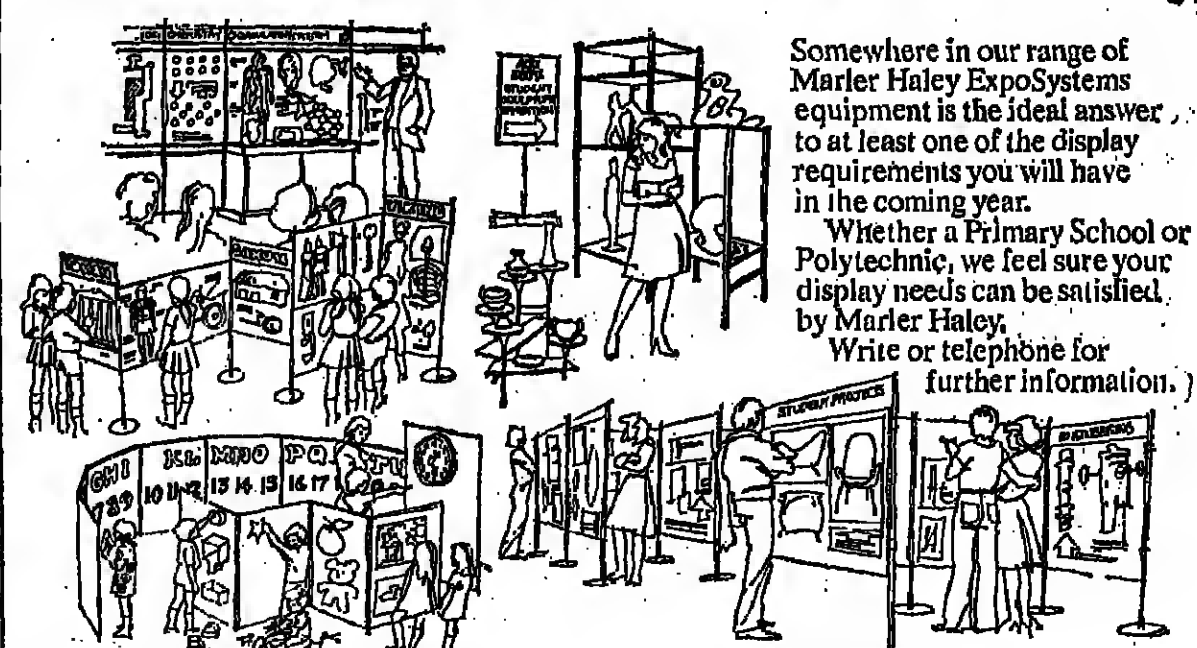
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NEWS

North of England Education Conference

Quality suffers as falling rolls bite in secondaries

by Sarah Bayliss

Falling pupil numbers are already affecting the quality of education offered in secondary schools. In 20 schools surveyed in a research project by Professor Eric Brinkley at Sussex University, falling rolls have caused curricula to contract and sixth forms to shrink below a practical size.

Addressing the North of England Education conference in Durham last week, Professor Brinkley said he had visited schools where only one foreign language was offered where science could no longer be taught as separate subjects and where music had disappeared from the timetable.

The hardest hit schools had an increasing unbalanced intake with fewer and fewer parents opting for them. Some had already become co-educational, while others had to take in 16-year-olds, he said.

If a child was the only one in a class with an IQ above 120 that child was deprived in his schooling, Professor Brinkley said. He pointed to Mr Michael Rutter's findings, from 12 inner London schools, that delinquency increased with an imbalanced intake.

Professor Brinkley, chief education officer for LEA from 1971 to 1976 outlined the different responses which authorities could make to falling rolls. There were two roads—one hard, one easy.

The easy road allowed free parental choice to operate with as many schools as possible kept open to avoid the "minimum viable" option for education administrators because

it minimized confrontation with parents and teachers. However this quieter life for officers cost money: resources still had to be put into the most unpopular schools to maintain a reasonable curriculum.

The easy route would lead to increased competition between schools. There was knowing laughter from his audience when Professor Brinkley said: "Some of you will know about winning and dining primary heads."

The alternative hard way was to have a policy on falling rolls and stick to it. It meant deciding how small schools could become before they were closed; how many schools the authority would need by 1990; and the nature of sixth-form provision. It was better in plan the contraction of schools than to close individual schools, he said.

Professor Brinkley produced one strong argument in favour of the hard road. The cost of school buildings averaged £70 per pupil—and £70,000 a year could be saved if two schools for 3,000 pupils, both only half-full, were merged.

Answering a question on single-subject teachers, Professor Brinkley said he found most teachers in his sample of schools with falling rolls taught more than one subject, but even more teachers should be prepared to do so. One reason teachers held out against this was that they fear that they might become more vulnerable to redeployment.

Findings of the research project which Professor Brinkley directs at Sussex are due to be published in April.

Higher proportion of leavers put jobs before college

The proportion of British school leavers entering higher education has declined since the birth of A-levels, 1950s according to Mr Mark Carlisle, the Education Secretary.

Figures from his department show the proportion has dropped from 14.2 per cent in 1972-73 and is expected to be down to 11.8 per cent by next September.

After a speech at the North of England Education conference last week, Mr Carlisle said that the universities admitted 20,000 fewer home students last year than the number allowed for in their government grant.

This week the DES issued a cor-

rection stating that the figure was 2,000, rather than 20,000.

Mr Carlisle had told the conference this trend offset the decision that the Government's no-growth policy would reduce opportunities for school leavers.

He believed that 18-year-olds who wanted to go into higher education in the future would have as good an opportunity as at present.

The most likely explanation for the proportional decline in 18-year-olds choosing to go to university was that many went straight into good jobs with their qualifications. This was not a bad thing, he said.



Mark Carlisle addressing the conference.

Tutors form new group for disabled

by Diane Spencer

Special education tutors have joined forces to fight for more resources and better training to teach handicapped children.

Last week they formed the Association of Special Education Tutors at an inaugural conference in Warwick University.

In the light of the Warnock Report on special education, published in 1978, the association will act as a pressure group in the scramble for scarce resources in teacher training. It also hopes to increase professional skills, act as a forum for discussion and promote research.

Special education has failed to meet the needs of the West Indian community, according to Mr Paul Widdlake, head of the Centre for Studies in Educational Handicap, Didsbury School of Education, Manchester Polytechnic.

He said that West Indian secondary schools for the mildly educationally retarded, the (ESMR) category, or second rate institutions which held back their children. Instead they set up "Saturday schools" run by their own community to teach the basic skills. "I find their disaffection with the special education system rather appalling," he said.

The notion that special education should not be part of initial teacher training was challenged by Dr Ken Jones of Bristol Polytechnic. "It is a myth that you have to work in normal schools for a long time before you can work with handicapped children," he said.

Only 22 per cent of teachers in special schools have an additional qualification. Little progress has been made in the past 30 years towards the goal of everyone teaching the handicapped being properly qualified.

"I think we are missing the best students with our present procedures. We tend to discourage enthusiastic young people who have a tremendous amount to offer. Instead many teachers went into special education because they liked the idea of small classes and it was a quick way of getting more money," he said.

Training Centres (ATC) are the fastest-growing area of provision for the severely mentally retarded. Dr Edward Whelan, from the Hester Adrian Research Unit at Manchester University, told the conference.

Unfortunately, staff had to be persuaded that their training was capable of doing more complicated tasks than they were given.

The pattern of university entries was complicated, Mr Carlisle said. A number of new students were drawn from the older age groups.

Talking on the issue of overseas students, he said the proportions had risen from 6 per cent in 1971-72 to 11 per cent—a trend that was "going wrong".

The increase in numbers over the decade would have filled two universities the size of Birmingham. It was therefore "an irresponsible" to reduce the proportion of overseas students, he said.

Mr Carlisle welcomed a recent increase in applications for engineering courses from home students

—though more girls should be encouraged to apply.

Overseas students had never doubted that a British education in engineering was a "good buy". Indeed something like 40 per cent of them had opted for engineering. Mr Carlisle's speech was one which spelled out a growth not which reflected the philosophy of despair.

On schools he said he had noted from the 1975 report that many teachers who qualified in shortage subjects such as mathematics and physical sciences were not teaching these subjects. Local authorities should say this source.

Monday's children: the TES competition for primaries

"What I do on Monday—and what I'd like to do." This is the topic for entries to the TES competition for primary schools. We have already received more than 100 contributions and would like many more. Here, for example, is how two entries began:

"Monday's lesson begins with one of my favourite ditties—primary mathematics."

"The size of my class is fairly big. It has about 35 children. I think to start with there should be fewer children—20 would be a good idea."

The competition is open to children aged five to 11 in primary and middle schools. We want

to know about some of the things they do at school—what they enjoy and what they dislike; what makes sense and what does not; what seems useful and what is missing that could be important.

The prizewinners will, of course, describe what children do; but they should also offer judgments and suggestions. Pictures are welcome, and we will pay £10 for any we publish (they must be reproduced well in black-and-white). But they will not be taken into account in deciding the winners.

The first prize will be £30, plus £150 for the winner's school fund. There will be 10 runners-up prizes of £15. Entries should not be

longer than 1,000 words. They can, of course, be much shorter. The schools should be legibly written or typed on one side of the paper, and each entry must carry the name, age, home address and school name and address of the entrant. The closing date is February 22.

The competition will be judged by the editor, and his decision will be final. The TES reserves the right to publish any entry. Correspondence will not be entered into, and entries will not be returned. Enquiries should be addressed to the Editor (Primary Competition), The Times Educational Supplement, New Printing House Square, Gray's Inn Road, London WC1X 8EZ.

Catholic pupils to pay double bus fare

by Bert Lodge

Catholic children in Mid-Glamorgan will next year be charged twice as much on school buses as pupils attending mainstream schools, a teachers' conference was told last week.

Another consequence of the government's decision to allow local authorities to charge for school transport is that numbers will be halved in at least three RC second-

dary schools in the north. Mr Harry Mello, head of Cardinal Newman Comprehensive, Coventry, told the annual conference of the Catholic Teachers' Federation. He said he knew of parents in Oxfordshire who were being charged twice as much for transport to a denominational school as to a non-denominational one.

From Choptell in County Down, the cost of transport to the

nearest RC school was £10 a week and some families had three children attending.

A spokesman for Mid-Glamorgan said that the higher fees would also apply to pupils at bilingual schools and for the same reason.

The conference resolved to call on Catholic teachers all over England and Wales to lobby their MPs this month to get the transport clause in the new Education Bill either removed or changed.

Sex equality party refuses to disband

The cure of the working party which produced the Manpower Services Commission report on the special needs of unemployed girls and women is refusing to disband. It will remain in existence as an unofficial pressure group to keep an eye on the way the commission runs its programmes.

The 21-strong working party was set up more than a year ago by the MSC's special programmes board in conjunction with the Equal Opportunities Commission, and included representatives from the Department of Education and Science, Inspectorate, the education and careers service, and industry. Its report, published in November after a series of meetings, has attracted widespread attention.

But a proposal from Ms Valerie Coleman, the working party's chairman, that a nucleus of its members should be kept on by the MSC to monitor the special programmes and advise the staff running them was turned down. Mr Geoffrey Holland, head of special programmes, told Ms Coleman that his officials did not need support of this kind.

Sir Richard O'Brien, the commission's chairman, backed Mr Holland. But, encouraged by the EOC, Ms Coleman and six others have told the MSC that they intend to go on with their job as an independent group.

They say they will, among other tasks:

- Collect information about the involvement of girls and women in the MSC programmes and publicise issues that arise
- Advise and prompt action by the special programmes division
- Advise on the Sex Discrimination Act and press for clarification where necessary
- Maintain support for research into curriculum development and training for girls and women to help them enter non-traditional jobs

Told that the EOC has decided to provide secretarial services for the group, the MSC has now decided to cooperate with it, and has agreed to appoint one of its junior officials as its representative.

After books, industry helps out with free computers

For Mr Neil Macfarlane, who last month commended a company for helping schools to buy text books, here is another example of industry charity.

So many pupils at Bristol's Portway School want to do computer courses this year that the school's facilities—card punches and a terminal linked to Bristol Polytechnic's computer—cannot handle them.

A Wessex-impro-Mare firm, DRG Business Machines, has agreed to make them a permanent loan of a complete installation.

It is a Cadin System 20, which is capable of handling all the account-

Computer groups bid for careers market

Rival computer systems are shaping up far faster in the new field of electronic careers advice. The government backed CASCAID guidance service, which has taken 10 years to develop, is already in danger of being outbid by systems which appear to offer a lot more.

CASCAID is a central installation developed with Department of Employment money by Leicestershire careers departments, which has so far persuaded 58 other local authorities to buy the service. Subscribers feed in details of their pupils—either by post or direct from their own terminals over post office lines—and get back a print-out of suitable courses and careers.

But CASCAID faces competition on two fronts—at one extreme, a push-button installation which conducts face to face interviews with individual clients, and at the other, a do-it-yourself guidance programme which any authority can run on its own computers if they are of the right type.

The interview computer is a commercial installation at the In-sight Centre in Glasgow, where school leavers are flashed test questions on screens and push buttons to reply. It is an electronic device

for administering personality and aptitude tests and matching the scores against standard profiles for a range of jobs. At £40 a head the clients also get a session with an industrial psychologist.

The Glasgow service is more likely to attract industrial personnel selectors, who tend to be more impressed by standard psychological tests than the education based careers service. The other system—which also happens to originate in Scotland—offers a more relevant alternative to CASCAID.

JIG, the Job Ideas and Information Generator, was devised by Edinburgh University's Dr S. J. Cross and consists of a set of inter-linked programmes based on a file of information about jobs and courses which a computer can match to a pupil's interests, qualifications, needs, and preferences.

JIG is meant to be used in schools, and is controlled by the teacher and the pupils themselves. A class or learner group fill in a questionnaire, with either the pupils themselves or the teachers scoring the answers. The scores are then run through the local authority's computer, which prints out a range of possible jobs for each pupil to discuss with careers teachers and officers. It describes

each job and its requirements and tells the pupil where to look for more details.

JIG is being tried out on a large scale in Lothian and in the London borough of Havering, where it is linked with the borough's own computer assisted career learning scheme. The combined system is known as JIG-CAL.

The system has been on trial in Havering since 1978, and is now in use by third-year pupils in 25 of the borough's secondary and special schools. Unlike CASCAID, which at present only deals with pupils who have at least some O levels or their equivalent, it caters for all levels of ability.

Leicestershire say they have concentrated on higher ability pupils because they are the group who benefit most from a computer's ability to sift a mass of detailed information. CASCAID is likely to extend up market rather than down.

It is already being used by a few polytechnics for discontinuing students, and there are plans to develop a full service for graduate advice bureaux. The CASCAID team say that if they are to provide advice for the non-academic school majority they will have to set up a separate system.

Havering's principal careers

officer, Mr G. Malt, says they consider that the "all levels" approach is essential.

That alone is likely to be a powerful attraction for other careers services, concerned as are most of them with the increasing difficulty of placing under-qualified youngsters in worthwhile jobs. Also likely to count with them is the fact that the JIG system is based on a questionnaire that they know and trust, the APU Occupational Interest Guide, which was devised specifically for careers guidance. The test, which in its original form has separate versions for boys and girls, has been turned into a unisex questionnaire for JIG, but it retains its main strength—an emphasis on discovering exactly what the pupil likes and dislikes, so that no time is wasted in suggesting careers that are unlikely to be considered.

But what may give JIG-CAL as a complete system a decisive edge over other job guidance aids is its potential for development as an educational tool. Mr Malt says that he has its possible extension into advising on sixth form courses, and eventually as a guide to course options and subject choices from the third year on.

Mark Jackson

SPECIAL ANNOUNCEMENTS

HEAD OF NORTHERN IRELAND OFFICE

The Central Bureau for Educational Visits and Exchanges is both a governmental agency and an educational foundation; on the one hand, administering a broad range of official schemes (such as teacher exchanges, language assistants and EEC study visits for vocational guidance and youth unemployment experts, local education administrators and young workers) and, on the other hand, developing opportunities for international studies, visits, exchanges and co-operation covering most parts of the world including music, the theatre and other arts in education, sports and recreation, expeditions and exploration, school/college/polytechnic/university links, adult education and special work for the handicapped and the disadvantaged. It is a world pioneer in many of these fields and is quoted as a model for other countries by the EEC, the Council of Europe and UNESCO.

The Central Bureau is also a major publishing house and gives advice on virtually every form of educational travel. It was founded in 1948 by the Ministry of Education and the UNESCO National Commission and is funded by the UK Education Departments. It works closely with the Northern Ireland Department of Education on a number of schemes and with many educational institutions and youth organizations in Northern Ireland, helping them to develop their own links and exchanges with other parts of the world.

"The world's leading organization in the field of educational exchange."
(The Rt Hon Mrs Margaret Thatcher, MP, when Secretary of State for Education and Science)

The Central Bureau is now to open an office in Belfast in order to make all its services more accessible to people in Northern Ireland, along the lines successfully employed in the Bureau's Scottish office in Edinburgh.

It will be clear from the above that a person with wide interests in education, youth, travel and international affairs is needed to head the Belfast office which initially have only had a total of two or three staff. The Central Bureau has an international reputation for efficient, economic management and effective, friendly service and cooperation, and the person appointed will be involved in a constant two-way flow of information, advice, outcome and project management, study visits and exchange which will require enthusiasm, skill and some relevant experience. Personal qualities are more important than formal qualifications.

It is hoped to open the office in April, 1980, but a somewhat later date might be possible. Conditions of service are akin to those in the Civil Service and the salary will depend upon experience but will not be less than £7,500. A secondment for two or three years would be considered.

For further details and an application form write to: Mr P. S. Duncan, Head of Establishment, Central Bureau, 43 Dorset Street, London W1H 3FN. (All enquiries and applications will be treated in confidence.)

CENTRAL BUREAU FOR EDUCATIONAL VISITS AND EXCHANGES

OVERSEAS NEWS

OECD

Thinktank slowed but not stopped by budget cuts

by Anne Corbett

PARIS The prestigious international education thinktank, the Centre for Educational Research and Innovation, of the Organization for Economic Cooperation and Development, has had its budget drastically reduced. But the cuts are not as bad as were feared.

Last month the OECD council approved budget cuts in many sectors including education. The CERI budget is 200,000 francs down on last year's total of 10m francs, and the Organization's committee for education, concerned with policy analysis, has had its budget cut by 300,000 francs. For CERI the cut is particularly serious as it coincides with the ending of a number of special grants from outside agencies which have amounted to 1.7m francs.

The optimistic view in Paris is that this represents a slowdown but not a serious interruption in CERI activities. But the decision not to make any immediate cuts in staff will severely affect the operational side: there will be fewer consultancy contracts and meetings, which many see as the most enriching and original side of OECD's

educational work. It may also mean that some projects go into cold storage without any certainty that they will ever be unfrozen. The early childhood project, with which the late Professor Jack Tizard was closely connected, and the urban education project which draws heavily on British expertise, are said to be likely candidates.

But two months ago it looked as if the cuts would be much more drastic. The Americans wanted a so-called supplementary cut of 30 per cent. This was later reduced to a demand for a 10 to 15 per cent cut, proposed jointly by the Americans and Germans.

There were two elements in this attempt to put the broke on CERI. Domestic politics are said to have figured large in the original American initiative: efforts were being made to cut overseas expenditure to appease American voters and the American State Department seized on a less than enthusiastic note from the retiring United States delegate to CERI to propose cuts, even though other American education advisers felt that the note should not be taken too literally.

But another factor perhaps has more significance for the future: what is the place of educational research and innovation in an inter-



Le Chateau de la Muette, OECD's Paris headquarters: what place for international research when education growth goes out of fashion?

national organization like OECD when education growth goes out of international fashion?

Members of the CERI council agree informally that the situation has changed dramatically since CERI was set up in 1968 and student protest highlighted the dislocation between existing systems and young people's expectations.

Student protest is no longer apparent. The economic recession and youth unemployment are the main problems with which educational systems now have to grapple. But that does not necessarily lessen the case for a body concerned with educational innovation. There has been much talk in Paris about the need for a new CERI to propose cuts, even though other American education advisers felt that the note should not be taken too literally.

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Italy

Reform bill aims to curb professor power

by Dalbert Hallenstein

VERONA Italy's lower house has approved a bill partly reforming Italy's semi-paralyzed university system. The bill, which must still be approved by the Senate, seeks to streamline the existing university organization by creating specialist teaching departments to replace the present faculty-based system which tends to concentrate power in the hands of a few faculty members.

The bill also aims to encourage an expansion of research and to create, for the first time in Italian universities, a three-year postgraduate "research doctorate" degree. This will be the equivalent of an English or United States Ph.D. The bill gives at least 35,000 university teachers a chance to achieve full tenure, at attempts to decline university teaching as a full-time profession, though making it possible for some teachers to choose in continuing working outside the university while teaching for limited, contracted periods. Until now there has been no valid regulation limiting the number of hours a professor has to spend in his faculty, and most of them were therefore rarely seen at university.

Since the reforms contained in the bill are highly controversial and it is predicted that when the bill is debated in the Senate early this year, some of the provisions will be changed or eliminated. The bill teaching provision and the compatibility of certain outside activities, such as the holding of high government and public positions, will be opposed in the Senate. Many senators may hold back two or three prestigious teaching positions, though most of them rarely teach and attend university only on formal or ceremonial occasions. In creation of teaching departments to replace the faculties is also likely to be opposed at Senate level. Many senators will certainly interpret the reform (quite rightly) as an attack on the present faculty-based university establishment and power structure.

Another controversial point in the reform is the provision which virtually guarantees tenure to all untenured teachers who have already been teaching in university for a certain number of years. The untenured teachers, estimated at about 40,000, must in the future sit for competitive exams to achieve full tenure. However, these exams are widely acknowledged to be a mere formality. Promotion is almost automatic. This provision has been criticized as extremely damaging to the future academic standards of Italian universities. For the reform will automatically sanctify all the teaching appointments and the past decade which were made by the faculty professors more for political or personal reasons than for the academic excellence of the untenured teacher.

The provision has also been criticized because it is likely to make it difficult to appoint younger teachers who are not already established as temporary in the universities. The guarantee of tenure will certainly create a situation of teacher overpopulation in the universities—where the number of students is already beginning to decline. And though the bill provides for the recruitment of 10,000 younger teachers over the next 10 years, many of these are unlikely to be a future government, Italy's increasing financial problems and a situation of overpopulation might mean that in the recruitment guarantee to younger graduates.

OVERSEAS NEWS

France

Protests block plan to put control of universities in fewer hands

by Jane Jessel

PARIS Following strikes and protests from university teachers and students, the French Government has, at least temporarily, shelved a plan to change the system of electing university presidents.

Under legislation introduced by Edgar Faure, then Education Minister, to democratize universities after the events of May 1968, the presidents, who are equivalent to Britain's vice-chancellors, were elected for a period of five years by teaching and administrative staff, and students.

A Gaullist motion for recent parliamentary debate simply sought to make presidents, who must be professors, eligible for reelection after their term of office. What angered university staff and students, however, was a Gaullist amendment, carried by 274 votes to 200, limiting those eligible to

vote to professors and senior lecturers—fewer than 10,000 in all, instead of the 74,000 formerly eligible to vote.

Teachers, students (including the Gaullist student body CLEP), unions of both left and centre, and political parties were quick to condemn the government's backtracking on the universities' democratic principle. This reform had been recognized as one of the main achievements of 1968 student upheavals.

To the protesters it looked as if the Government was trying to put the clock back to a pre-1968 situation through an unpopular and inflexible change without any consultation. Reversion to university control by "mandarins" was threatened. Two days of strikes and marches were called in protest.

Unlike other conflicts within French education, political and ideological differences seem to have been put to one side. Senior univer-

sity staff protested: 80 of the 120 professors at the University of Paris at Orsay signed a letter to both houses of parliament against the Government's plans and called for continuation of the 1968 law; and the Gaullist who introduced the amendment, Antoine Rulhière, does not have full support within his party.

The proposition subsequently came to the Senate in December. The Government decided the wisest course was not to change the law immediately, but for the Senate to reconsider the proposal in April, probably in another form.

The division within the Senate of the governing coalition, the cross-benchers' wish to see the matter reconsidered and the doubts of some Gaullists make it less likely that the reform will go through as currently proposed. If it does, it could create a minor political crisis as well as a major educational one.

Malta

Sixth formers go to work in radical secondary rethink

by Carl Slevin

Secondary education in Malta is to be radically reorganized in the course of this school year by major curriculum changes, the introduction of an apprentice/pupil scheme for sixth formers, and a financial squeeze on the private sector.

The curriculum changes divide pupils into two general groups at 13-plus: Those "motivated and able to successfully follow an academic-based course" and those "not motivated and/or unable to follow successfully O level examinations", according to an education department circular. Both groups take four major compulsory subjects in their third, fourth and fifth years, Maltese, English, Arabic and mathematics. Those of the first group who intend to go on to do any A levels must also take physics, in addition both groups take religious education, physical education and civics as further compulsory subjects. Pupils in the first group select two more subjects from a list of 16 options, while those in the second group take an integrated science course as well as needlework and home economics in the case of girls, and maintenance crafts in the case of boys.

The imposition of Arabic as a third compulsory language for all pupils is a clear reflection of the Government's efforts to draw closer to its Arab neighbours, especially Libya, with which Malta has a special, if occasionally troubled, relationship. Arrangements have been made with Libya, Egypt and Syria to provide Arab teachers for state schools.

Sixth form education in the state sector in Malta is concentrated at the Lyceum, a sixth form college, but some private schools also provide facilities for sixth form work.

From the current year, however, all entrants to the state sixth are obliged to join the apprentice/pupil scheme. This means that instead of full-time academic education for a standard two years they now undertake a five months study/five months work sandwich programme with two months' holiday.

However, because of the requirement to pay young and untrained personnel for the whole year in return for only six months work, it seems unlikely that more than a very few private employers will sponsor apprentice-pupils.

The government claims that these payments will make it easier for the children of poorer parents to stay on at school and to go on to higher education with the help of the student-worker scheme which operates like the apprentice/pupil scheme of that level. The benefits are not as great as they seem, however, because parents who receive the payments will lose the children's education allowance from their coding, and will be taxed on their income including the extra £M2.

Last November's entry, the first after the introduction of the scheme, has been predicted at around 600, but reached only 300. It seems unlikely that there will be any improvement when the next predicted 600 are due in May.

The private sector has been squeezed for months ends. Its fees and the capitation grant paid out of taxation have been frozen since September 1977. Its costs have increased over and above the rate of inflation as a direct result of Government action.

Cost of living increases in wages in the period amount to £M7 (£9) a week for each employee and employers' national insurance contribution have increased by £M1.50 (£2) a week. The curriculum changes have also increased costs.

Greece

Government climbs down on exam law

by Mario Moillano

ATHENS The Greek Government decided last week to rescind legislation tightening the rules on university examinations which had been widely spread student agitation before the holiday break, culminating in the occupation of university buildings by students.

The decision was made on the advice of the 13 rectors of Greek universities and graduate schools who were consulted today by Mr. Constantine Karamanlis, the Prime Minister. The Greek Government had introduced the controversial legislation in an attempt to upgrade Greek university diplomas.

Greek student leaders have been arguing that Greek institutions of higher education were too inadequately staffed and equipped to claim such high standards from the students. The main grievance was the abolition of the possibility of repeating examinations, twice, in case of failure, rather than once. The decision to set up a commission of all university rectors which is to produce proposals by next March on the necessary revisions to the rules on examinations. Until then the relevant provisions of the law are suspended.

The same commission has been asked to produce a draft for comprehensive legislation covering all aspects of higher education. The student organizations are to be given a chance to voice their opinions during the preparation of the draft.

The reactions of Greek students to these decisions are not yet known. The present conflict between the students and the state has become a convenient pretext for some anarchist and extreme left organizations to encourage a broader confrontation with the authorities. What makes this significant is that this movement, evoking memories of pre-1968 Paris, is gaining momentum at a time when Greek students are increasingly becoming disenchanted with the rigid discipline imposed by left wing political parties on their official organization.

West Germany

Working class student numbers drop

by David Dingworth

The ninth report of the West German Student Welfare Organization (DSW) on the financial situation of students in the Federal Republic indicates that fewer young people from working class homes are taking up university places. It is based on the results of a survey carried out in the summer of 1979.

Although the proportion of workers' children in the student population of a whole rose from 13 per cent to 14 per cent between 1976 and 1979, the number of first year students from such families declined from 14.5 per cent to 13.7 per cent during the same period. This downward reversal, from which had been evident since the mid-1960s, and represents a set back for the Federal Government's policy of extending the opportunities for higher education to young people from all social classes.

In the opinion of DSW President Herr Gerold Grünwald, two main factors are responsible: the fall of real wages to keep pace with the general growth of economic prosperity in recent years and steadily pessimistic forecasts of the future level of graduate unemployment. School leavers whose parents themselves went to university are, he feels, more willing to disregard such warnings than the children of manual workers.

Statistics contained in the report support this interpretation. Whereas in 1976 90 per cent of students had been awarded the Abitur (the university entrance requirement) at the end of a traditional grammar school course, by 1979 89 per cent of all undergraduates and 92 per cent of those in their first year had gained admission by this method. There had been a corresponding decrease in the number who had obtained their qualifications via the Fachhochschulen (colleges of advanced vocational education) or evening school studies.

Herr Grünwald also expressed concern that the proportion of students receiving financial assistance under the Federal Educational Grants Act had fallen from 38 per cent in 1976 to only 33 per cent in 1979. He believes, however, that the fact that the threshold for parental contributions has been raised in line with increases in family incomes.

Australia



Surfing goes on the curriculum

by Bill Purvis

SYDNEY Australian schoolchildren in New South Wales, now enjoying their six-week summer holidays, can look forward to extra time on the beach after they resume classes.

The state education department has added surfboard riding to its list of approved sports at state schools. The sport will be available to all pupils aged 15 and over who attend schools near the coast—about 80 per cent of the school population of that age.

Mr. Eric Bedford, the Education Minister, approved surfboard riding as an official sport after a trial period this year at two high schools. Schools adopting surfing as an official sport will have to have teachers with a bronze medallion in life-saving to supervise the beach visits.

New South Wales has had an abnormally dry hot summer so far with the December rainfall figure the lowest since 1959. If this weather continues after schools resume at the end of this month, the number of pupils opting for tennnis and cricket is expected to decline in favour of surfing.

Meanwhile, school pupils in the most northern capital, Darwin, can now have driving lessons as part of their school curriculum. These children live in the most isolated city in Australia. Everyone in Darwin has a car or motorcycle and schools have recognized that young people will learn to drive somehow.

In 1978 a committee was set up to examine ways of teaching teenagers to drive as part of their school education. Since then the programme has expanded rapidly and now about 500 students are involved. They not only learn to drive but also have the satisfaction of passing a school subject by doing so.

Student driver education is offered as a one-year subject for pupils over 15. It involves 60 hours of theoretical instruction plus 20 hours of driver-training.

Mozambique

Teachers sent away for re-education

by Joe Hanlon

MAPUTO Seven primary school teachers have been presented at public meetings in Beira, Mozambique's second largest city, accused of stealing, drunkenness and, in one case, "sexual corruption" with a pupil. Several are to be sent to reeducation camps.

Raul Cuveca, secretary of the Beira Committee for Ideological Work, told the meetings that the teachers were "being presented to them to stress the necessity of 'popular vigilance' in the schools." "In the same way as a fish cannot live out of water, a teacher cannot be successful without the involvement of the people."

But attempts to increase parent participation in schools have been unsuccessful so far, although adult education has become a national mania with more than 250,000 people taking literacy classes last year.

Adult literacy in the country is less than 15 per cent after years of restricted education under the Portuguese. Now the education system is growing faster than can be effectively managed. In 1974 there were 700,000 primary school pupils. By 1977 this had jumped to 1,200,000 and it is now 1,500,000.

Compulsory primary schooling by the end of the decade is the country's prime educational goal, but there is a desperate shortage of trained teachers.

Europe

International aid for rights of children

by Hilary Wilce

STRASBOURG An international organization has been set up to deal with cases of child imprisonment and torture. The Geneva-based Defence for Children aims to bring international pressure to bear in incidences of child maltreatment. These include situations where families are separated for political reasons, and where children are abducted to elicit "confessions" from their parents.

Defence for Children was set up in July last year and is now active in about 20 countries on five continents as Guatemala and the United States, according to Nigel Cantwell, secretary-general.

"In Europe these tend to be administrative cases, cases of wrongful decisions by lawyers. But this is not just western Europe. We have such things right on our doorstep." The organization plans to try and get action at local or national level before taking cases into the international arena by lobbying diplomats and by arousing the concern of other international agencies. "The Federation of Montiel Health, for example, is a solid ally."



Young thieves are brought to Bangui, capital of the Central African Republic, for the punishment of having an ear cut off, during the reign of the self-styled emperor, Jean Bedel Bokassa. Bokassa was last year accused of involvement in the massacre of 150 schoolchildren who refused to wear school uniforms. This case was brought to the attention of Defence for Children, before a coup forced Bokassa to flee.

by publishing a report on the damage imprisonment could be doing to a child's health. Cantwell said, "Defence for Children has links with a dozen countries and is in the process of raising £55,000 from voluntary aid sources for its first year's operation." It was created partly in response to the many requests for individual help received by the International Year of the Child secretariat for Europe. "Children fall between the cracks of existing organizations," Mr. J. F. McDougall, director of the secretariat, said. "An organization which deals with the rights of political prisoners will not necessarily be able to help any children involved in such cases."

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Education Unit Family Planning Association

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Cockpit Arts Workshop—Fifth Annual Cockpit Lectures YOUTH AND SCHOOLING

9.45 am to 6 pm, Friday, January 18, 1980

The Cockpit Lectures are annually concerned with crucial issues in the arts and education. This year the Cockpit Arts Workshop will be presented by Cockpit Arts, a variety of artists, writers, critics, teachers, and students, and the work of artists and writers in education and the arts.

Cockpit Arts Workshop—Fifth Annual Cockpit Lectures
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Sports Diary



A striped Ian Chappell scoring for Australia against the West Indies last month.

Stanley Levenson

Colourful cricket

themselves to the special requirements of each workman.

Men like Ian Botham, Geoff Boycott in his twilight years, Mike Procter, Viv Richards, Clive Lloyd were and are great players whether in 40 or 200 overs. The only snag is that negative tactics are so often the low of the day in one-day games, in spite of the rules designed to prevent them.

One-day matches are the norm for most players, not just the 200 or so enrolled with the first-class counties, although at club level many games have no over limits or other artificial restrictions.

Cricket has gained in popularity but there are good reasons for a certain pessimism about its direction in the 1980s, a sign perhaps of mispent 1970s.

Cricket, which more than any other game is supposed to be the yardstick of true sportsmanship, is now infected with some of the malignant viruses which have struck other games.

To say this is not to sigh for a revival of the Dr Arnold philosophy but for the standards which should be the ethos of all sports.

When cricketers dance like dervishes at the fall of an opposing wicket it is but a quickstep away from arguing with the umpire when his decision is unwelcome. Even those who cannot lip read know full well what a bowler is saying on television when he is bowled by a man in the white coat.

Will cricket soon be plagued with shameful scenes, football style, of players chasing umpires up and down the pitch in pursuit of an lbw decision?

Disputations with umpires are at least as old as W. G. Grace, who was no paragon, but the modern version has the instant disadvantage of being seen on television with quick transmission to younger minds. Who can match the young footballers in park holding beliefs from the examples they see on television. The same could happen in cricket unless the authorities are alert and principled.

There could hardly be a worse example than that from Australia where the ruling body recalled Ian Chappell to the team a few days after "punching" him with a six-

week suspended ban for two altercations with an umpire.

From Australia, too, there have come reports of quite savage fighting among spectators at big matches, on alarming trends.

More's the pity for cricket in England is taking an upward turn. Interest among youngsters is greater than for many years, thanks largely to competitions like the Prudential World Cup, but where can they play?

Too few schools in the unaided sector have their own pitches and many of those are unsatisfactory. Part of the solution lies in the installation of artificial pitches which, even in these chilly financial days, is not expensive—and is certainly cheaper than paying for the constant maintenance of grass pitches.

With all the research that has been carried out there is no practical reason, and hardly a financial one, to prevent school cricket having suitable man-made pitches.

Cricket already suffers from being a one-term activity, always affected by exams. Which makes the prospect of playing much more worthwhile. It can carry a boy over into a local colts team during his summer vacation—or at worst a visit to Old Trafford, Lord's, the Mole Valley, or even, complete, of course, with sandwiches and soft drinks.

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features

'The very methods one is forced to use to get candidates through O level are well designed not only to stop them from effectively learning French, but from learning anything at all'

Harry Ree on why foreign languages don't belong in any core curriculum

If the present trio of education ministers, or the inspectors who advise them, are seriously thinking of putting a foreign language into the compulsory core curriculum (presumably sentencing all children to five years of French, German or Spanish) they should be persuaded to think again.

The first question which needs to be answered by anyone pressing for this compulsion is: Why? It is not good enough for them to answer that learning a language broadens the mind, opens up other cultures, makes a pupil appreciate the niceties of language. Admittedly some children by learning a language benefit in these ways, but if all (whether they want it or not) are forced to sit through five years of language learning, the numbers benefiting will be minimized, while the teachers' efforts will be squandered, and their patience and ingenuity tried to breaking point.

It is not even correct to assert that every cultivated person should be able to speak and understand at least one of the great European languages. How many of the staff at the Department of Education and Science would qualify, other than those who are professionally engaged in inspecting the subject? There are many highly cultivated and well-educated ladies and gentlemen who find it difficult to construct and speak even one sentence in a foreign language, let alone understand a foreigner talking in his own language.

What then is so peculiar about learning a foreign language, which causes it to stand out from other subjects? What makes it an exception, with a number of peculiarities the others haven't got?

First, whatever other teachers say, a foreign language is more difficult to teach to British children than any other subject. There are good reasons for this. While mathematics, English, the sciences and practical subjects appear to pupils and parents to be potentially useful later, and even necessary for earning a living, the learning of a foreign language possesses this potential value only in the opinion of a very few; and so to many it seems to be an annoying waste of time.

Even colleagues teaching other subjects may share, and not conceal this view, for it has not done much for them. Looked at objectively, and taking into account the often xenophobic prejudices and restricted background of some pupils and parents, this opinion is understandable.

Thus, from the beginning, motivation, in the case of many pupils, is so low as to be insignificant, in others it is nil: in which case it is transformed into a determined effort not to cooperate with the teacher. This leads to boredom, and to make boredom bearable some pupils divert themselves by provoking the teacher, or disrupting the class.

It will be argued that teachers of other subjects which are often seen as non-

essential, such as history or geography, face the same difficulties, and it is up to the teacher of a foreign language, as of any other subject, to contrail the disrupers and interest the apathetic. But apart from the special reasons for low motivation, there is another inhibiting peculiarity of language learning which is not shared by any other subject, except possibly by singing.

To teach a language effectively, it is necessary to get all pupils to speak it out loud. For many adolescents, to make an unfamiliar noise at the request or insistence of a teacher, and to make it solo before an audience of their peers, is so painful as to be, in some extreme cases, impossible. For such individuals there is a psychological inhibition which stems from a real embarrassment of appearing stupid, or of exposing their seeming deficiencies in public.

The teacher who tries to overcome this block by threats or ridicule makes matters worse, succeeding only in intensifying hostility to the subject, to the teacher himself, and even to the country whose language is being taught.

As time goes on, these impediments to learning ensure that an increasing number of pupils lose heart, because they can see clearly that they are making no progress, however encouraging the teacher tries to be. And since in teaching nothing fails like failure, an ever increasing number, even of those who started full of hope and enthusiasm, begin to give up, and join the ranks of the bored and the hostile.

All these handicaps, the prejudice against the subject, the embarrassment, the potent lack of success resulting in boredom and hostility, make the task of control far more difficult for the language teacher than for others. And yet, in teaching a language, the need for control, in order to establish the necessary stretches of "listening time" when one pupil or the teacher can be clearly heard by all, is absolutely essential.

It is true that control can be achieved by some exceptional teachers, and especially by those who are prepared to rule by fear. But a frightened child sneaks even his own language with difficulty; to speak a foreign language when gripped by fear is almost impossible. There is always of course the old teacher's trick of "getting them to write", but then what becomes of the essential practice of speaking and listening?

Modern languages is the one subject where, especially in the early stages, children cannot start learning, or start teaching themselves, from a base of already acquired knowledge. The new language needs to be delivered by the teacher, who is the sole supplier, the conductor, imposing herself and her skills on the children in a way they are quite unused to with other teachers. She cannot

say, French at O level and who are now, as adults, able to feel at home speaking, reading or listening to French, are those who went on to take it at A level, and then at college or university, and are probably now teaching it.

The rest—the huge majority—feel highly inadequate when in France: "After all, I only got O levels". Among these of course there are some who have achieved a certain fluency, not because of what they got out of the classroom, but because they have made trips or friends or deals or love in France.

Ever since its origin as a stepping stone to a university department via a higher certificate or an intermediate examination, the examination has emphasized the importance of being able to write correct French. This is not only the most difficult of language skills to learn, it is of course the easiest to mark, to grade and to examine. And yet it is a skill which in all probability will hardly ever be used by the candidate again, unless of course they go on to A level and thence to university or college, where prose composition is for historical reasons so highly prized.

The extent to which people who have nothing directly to do with teaching have accepted and imposed on schools this "O Level standard" would be funny if it were not depressing. How many of these have examined the examination papers, and become aware of the time-wasting teaching which these impose for at least five years before the exam is taken?

Perhaps even more depressing is the way teachers have been forced by such people—by misguided parents and employers—into teaching in a way they know to be wrong. The very methods one is forced to use to get candidates through O level are well designed not only to stop them from effectively learning French, but from learning anything at all, because they get so bored.

A compulsory language, leading to O level, used to make some sense in grammar schools (although the learning was far from successful). But these two aspects of grammar school teaching—compulsion, and the emphasis on writing—are not transferable to the comprehensive school, and still less to the still existing modern school.

What then is the reason for teaching a foreign language to the majority? The first is social, not academic.

To be able to go to a foreign country and communicate with the natives, in their own language, at the simplest level, can teach a lesson about humanity and nationality which is invaluable. This experience could be offered to all children during the first, and possibly the only, compulsory year of language learning. It would be better from many

continued on next page

REPEAT IN ITALIAN:
THERE HAS BEEN A MISTAKE.
MY FATHER IS NOT RICH.



features

continued from previous page

points of view to extend the compulsory period to three years, but not to spend the compulsory period studying always the same language.

After the first year, when the aim, stated and agreed with children and parents, will have been to give every child the ability to get by in, say, Spain, with a small collection of phrases, some basic knowledge of the Spanish environment, and an insight, however small, into the world of language, the next year their learning could be extended by taking in another foreign country, and another language, treated in the same way; and in the third year, yet another.

In this way, curiosity and therefore motivation are more easily maintained. But to keep children for three years on the same language is, for many, a story of increasing failure and hostility; it has also been shown that such an extended experience builds up antipathy not only to the subject and the teacher, but to the foreign country as well.

At the end of these three years, a further two years of study should be offered to all, but only volunteers would be accepted. Probably the language offered will be the one studied in the third year, but another can be started later by those who are enthusiastic, and who will already have tested it for a year.

During the three compulsory years, only a small proportion of the five-day week needs to be claimed by the language staff. Two or three periods a week are enough, and a short visit to the foreign country should be accepted by parents as an essential component of the course, and some of them should accompany the party.

But in the fourth and fifth years, the volunteers need to concentrate on the language for much longer periods, and the language department should be paid back for the time they have not used in the first three years by being offered during the next two at least a whole morning and a whole afternoon for intensive learning.

Such a method implies the sacrifice of a sacred cow that used to be worshipped by language teachers, the drip-feed process by which the language was fed in for four or five short periods each week. It has not proved effective, and often it was only insisted on by teachers who could not contain, for longer periods, their classes of despondent learners, who had become bored and frustrated with the same menu of diet and ushes for five periods a week.

The language inn, once thought to be the means by which instant French could be induced, has proved a total failure with the average child and the average teacher. Mechanical learning has proved even more boring than when a human teacher was using her voice and her gestures; and the machines of course offered an ideal menu of relieving boredom: by turning knobs and unscrewing terminals the victims could soon complain that it was not working.

This, of course, does not disprove the value of language labs for motivated adults, and cassette tape-recorders are an almost essential adjunct to my language lesson. But school language laboratories, introduced at great expense over the past 20 years, have contributed little except to the profits of the manufacturers.

Learning a language can be effective and valuable for the majority in a comprehensive school, but the process should be divided into two stages. The first is a tasting experience, where the aims are limited but are seen to be worth while. The second must be undertaken only by those who want to continue to learn the language, whatever the ability.

But their extended learning should not be limited to two years. Every school-leaver should be offered a voucher for further learning in a school or college. This would make sense in a world where useful leisure will soon become as important as useful employment, and where travel abroad involving communication with native speakers will become increasingly sought-after by all.

Can these arguments, already supported by many teachers, and by research, be accepted by ministers and their advisors?

Harry Rée, a former grammar school head and professor of education, now teaches modern languages at Woodberry Down School, London.

'We had to contrive individual attention before, but now it comes naturally: there's time just to stop and talk to a child'



Virginia Makins finds that Manchester primary teachers are making good use of the breathing space provided by the effect of falling rolls on the size of their classes. Pictures by Homer Sykes.

"These children will get what the best prep schools give—and much more, with all the creative work we do", said Josie Hobbs, head of St Peter's Roman Catholic Infant school in Manchester.

Falling rolls, combined in some districts with the vagaries of housing and rehousing policies, have meant that some primary schools in Manchester have recently seen a sharp decline, both in overall numbers and in class sizes.

I visited five of them. They catered for very different neighbourhoods, and their approaches varied. But in every school except one, teachers were unanimous in their conviction that they were achieving far higher standards, and doing much more for children and their families than when schools and classes were bigger.

Their experience seemed to raise important questions about how far relatively expensively staffed and equipped small schools can pay their way by removing the need for much crisis spending later on—on special education, remedial education, social services, mental health and so on.

St Peter's is on a big, established housing estate in Wythenshawe. Ten years ago it had 188 children—now there are 85—with another 56 children, mostly full-time, in the large nursery. Including the head, and a home liaison teacher, there are eight teachers.

There is space both for a well-equipped room for mothers and toddlers, and a family room where parents come to sit, work with children, or attend newly-arranged adult classes. The staff are actively trying to extend relations and activities with parents—and in the process, finding out how much they had unconsciously made communication difficult in the past.

They bring over with enthusiasm almost how their work has changed since class numbers settled at around the 20 mark. But they do not want them to shrink further. There seemed surprising unanimity among all the Manchester teachers I talked to (with the exception of one junior school) about the size of primary classes.

Somewhere between 20 and 28—the lower figure for infants, the higher for juniors—apparently feels just right. Below 20, the teachers say, it goes "dead", you "lose the spark". Above 30, "you start relating to groups rather than individuals, and work by finding ways in which groups of children are similar, instead of noticing individual differences".

In all five schools, teachers pointed to some disadvantages with small groups. Able children can miss out on competition. In activities like physical education and dance, all children can lose pace and initiative.

At St Peter's these disadvantages were easily overcome. They double up groups for physical education, freeing a teacher to get on with preparation and planning. They take out able children from more than one class, to stretch them at writing or science.

"I used to put on an experiment every week with my big classes; but it was hard to follow up. Now the able ones can pursue it and I have time to watch and listen", said one teacher.

Above all, small numbers give the teachers time—to listen to children, discover what they know, extend their language. They discover surprising areas of ignorance—such as the child who thought a peach was a round block thing.

They can take young children straight through a short reading book, instead of breaking off after two pages and losing the context.

Behaviour improves—there are fewer fights in the playground. The whole place becomes "more friendly" (a phrase I heard very often).

In a recent article on research into the effects of class size, Clare Marshall concludes that results are "conflicting, inconclusive and disappointingly meagre". ("Time to mend the nets: a commentary on the outcomes of class-size research", Trends, Autumn 1979).

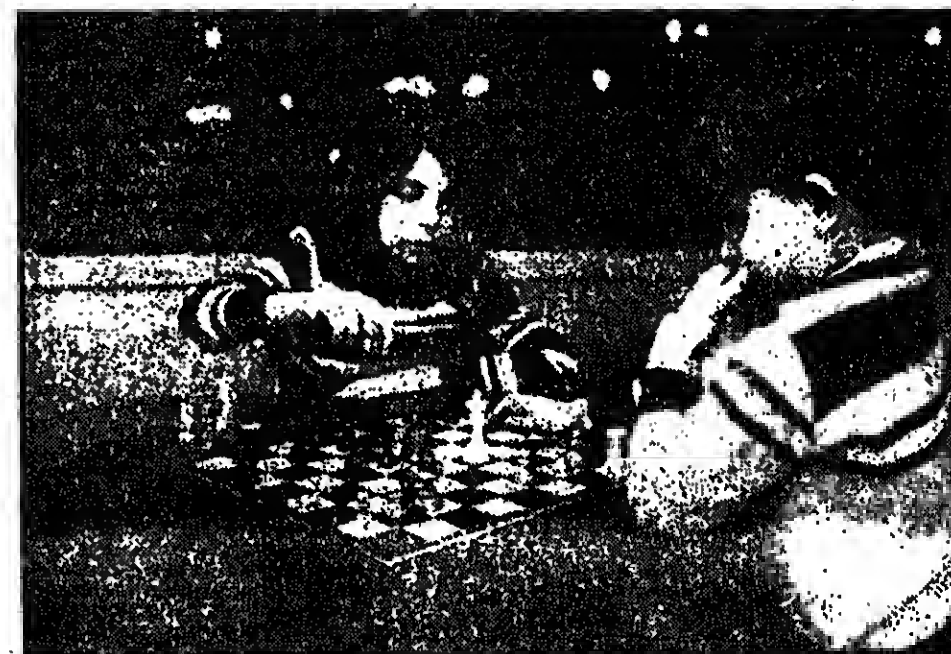
She points out faults in the research design of widely quoted studies, which purported to show that standards improve as class size increases. Much of the research concentrated on a very narrow band of educational outcomes, measured by the blunt instruments of standardized tests.

Recent studies, she says, have tended to show that children do learn more at primary level in smaller classes—even on the evidence of narrow achievement tests. But studies which set out to observe how teachers function suggest that many do not adapt their teaching styles to make the most of smaller classes.

That last finding may explain teachers' views in the odd school out among the five I visited. Charlestown Junior serves a vast old estate on the leafy northern edge of the city. It was built for 540 children, and until recently had several streaming classes. Now, with 185 children, streaming would be impossible even if the head wanted it, which she does not.

But four of the teachers felt strongly that they would rather teach 40 children in a streamed class than 20 in an

features



More time for drama, music, chess and gymnastics can help these Manchester primary children tackle their maths and reading.

unstreamlined one. They admitted that in small classes they knew the children much better. But they felt this was not in itself much of an educational advantage.

"You get bored with the children you've got", said a youngish teacher. But an older man said: "A small class is not so self-reliant, they're everlastingly at your desk, they're much more demanding".

These teachers talked of the effect of "one rotten apple in the box", and explicitly said they were talking of rotten intellect, not behaviour. "With a B class you know their limitations; you do little and often and checking up."

Armitage primary is in a pretty devastated bit of the city, lived in by families who face considerable material and social difficulties. There the staff don't mention limitations. They talk of children's achievements—at music, drama, gymnastics, chess. The head says she gets cross when teachers from the suburbs refuse to believe her "inner city" juniors regularly get a Grade IV in Associated Board music exams.

The school has 120 children aged three to 11: four years ago there were more than 200. There are nine teachers, including the head. As in all the other schools, small age groups meant some children had to be taught in mixed-age groups—when most teachers would have preferred single-aged classes.

Apart from that, the teachers like the size of the school. "You dread a transfer," said Eric Wright, the deputy head, who teaches older juniors. "The most important thing is that the nursery children know Eric," said Wynne Harris, a confident ancillary.

All juniors play an instrument—and since the school has no music specialist, every teacher decided to learn one alongside them—backed by the excellent peripatetic music service. You see six-year-olds laying out a chess board, and settling down to a game. There is badminton before school on Mondays, clubs after

school most days, and old students keep dropping in on their way to and from secondary school.

"Things like music and gymnastics make the children much more self-confident", says the head, Heather Stemp. "It helps them tackle maths and reading".

Reading standards have improved in recent years, but the staff are not satisfied.

"The remedial end has diminished. We've got them barking at print beautifully. But the upper end hasn't budged", says the head.

The school used regularly to be broken into. Now break-ins are rare. And the small size of the school helps when dealing with individual behaviour problems: "Everybody knows about a child, and everybody knows the plan of campaign".

Royce is another all-through, three-to-eleven inner city school with a high standard of music and gymnastics. It's in Hulme, just opposite those medium-rise blocks of dingy concrete that Granada TV programmes have made notorious.

Portly thanks to Manchester's newish policy of deconcentrating young families out of the blocks, numbers have slumped from over 400 to 200. As in the other schools, this means plenty of space for mothers and toddlers—and the steel band. The teacher-pupil ratio in the school—infant groups are around 16—now matches those in special schools, so there is no point referring borderline children to give them the benefits of small classes.

In the past few years, measured standards have gone up. There used to be, in this predominantly black population, a gap between adequate non-verbal test scores, and poor maths and verbal reasoning ones. Now all the scores have improved, and the gap has closed.

"The general atmosphere in the school is much better," said a teacher. "There are fewer behaviour problems—they used to come because children were seeking attention in a big group. There is more time for parents too—and relations with them have further improved since the



school has had a one-third share in a home-school liaison teacher.

The head, Joyce Durrill, says they always tried to give children a feeling of getting individual attention: "We had to contrive it before, but now it comes naturally: there's time just to stop and talk to a child."

Perhaps as a result, the children seem remarkably competent socially, and chat away at dinner to strange adult visitors.

Hanbury Wilkshire, who teaches top juniors, said: "There's time for extended reading, taking an interesting book with a group. There's time to sit and discuss things with the able ones. With a big class, you never had time to listen."

Lower down the school, teachers say "we have time to give them the language experience they'd get in a good home." But at Royce, and the fifth school I visited, Openshaw C of E primary, you also see the rub. Small schools and classes are fine—but not when low numbers threaten the existence of the school. "If numbers were stable, this would be an ideal size—but at the moment they're unstable, and it's not a happy situation", said Joyce Durrill.

Openshaw is a notably friendly school for 120 children, in a building, designed for many more, that opened in 1972. Last year there were two infant classes in space for three—now there is one. "If a family of three children move away, you notice", says the head, Harold Bowcott.

New housing is being built, and more families with young children may move in. But it isn't certain. And there is enormous overcapacity in the neighbourhood schools. "Local people say they don't know why this school was built—you could see the difficulties even before the fall in the birth-rate."

Manchester education authority has moved cautiously in tackling the issue of falling rolls and new housing policies. They are only now drawing up rationalization schemes, district by district, with inevitable closures and mergers.

But unless the Government forces dra-

stic changes in the level of rote support grant, Manchester is likely to go gently. Current plans will mean a worsening of the primary teacher-pupil ratio—but only to 1:21.4.

In many other authorities, with lost historic commitment to education, pressures to let class-sizes slip back up into the 30s will be harder to resist. Other pressures—to abandon plans to convert spare primary space for pre-school use, to cut "extras" such as peripatetic music services—are already having an effect. And many experiments, pioneered in authorities such as Manchester, will not now spread to others—the home/school liaison teachers are a good example.

Visiting schools like these Manchester primaries, it seems there may be considerable social and cost benefits in staffing schools so that teachers have time and space to work with, talk to and—most important—listen to individual children, and of providing pre-school facilities in schools, and links with parents of under-fives.

Some recent evidence points to benefits of parent involvement and pre-school services—fewer children in care and on the battering register, in districts with nursery schooling in Devon; better parent attitudes to school five years after a home visiting scheme in the West Riding; prevention of failure at secondary stage among children who took part in American Headstart programmes.

There is no evidence that standards in city schools have gone up simply because numbers have gone down. But the subjective experience of the Manchester teachers suggests that numbers may be very important.

Certainly, looking at the schools, it seems that keeping class sizes well down in the 20s, and keeping schools at the 200 mark or even below—well below for infant-only schools—can make for an impressive level of achievement and social competence in inner city children, and might well relieve a lot of expensive failure and stress among teachers, children and families.

مكتبة الأصل

this can do to their pupils

A now and overwhelming need arises (as a rule) in the mid-adult when the next stage takes over: the adolescent characteristically wants a rapid and total answer to the problems of reality and fluidity in a comprehensive explanatory schema to which all detail is subordinate, destruction takes over from the past. The adolescent reacts with enthusiasm to the "mindless" fact-gathering of the romantic stage, and in its fear of the despair that would ensue if the strait-jackets of the imposed world view were to vanish tends to become ruthlessly self-centered. In the last, maturity is the attitude of acceptance and learning, arrives first (does arrive) with the recognition that the external world should be

Every mind passes through stages which are age-conditioned reactions to the impact of the world upon the observer. There are four such stages: the mythic, romantic, philosophical and ironic

Whether or not one accepts the descriptively terms here used and very carefully defined, a little thought soon shows that Professor Egan is talking about what actually happens. Once the point has been spelled out, it is obviously true that all of us, from early childhood onwards, are in a state that leads through some or all of these stages. The first stage (but more particularly the first three which are experienced during schooling), is real and total, encountered with the sort of commitment instinctively rather than deliberately, and each stage except the last tends to be a totally comprehensive of its kind. In this sense, as Professor Egan says, that "each stage is effective only if it is carefully directed to the peculiarities of each stage."

and he offers detailed and convincing advice.

It is pointless to ask the rationale to think in schematic abstractions, and it may well be worse than pointless to oppose totally abstract theoretical particulars to the philosophical constructs. To particular Professor Egan demolishes the predominant notion that learning best proceeds from the general to the particular, by placing at the centre of the learner's necessarily limited experience, inhibits development away from alienatedness (and in addition fails to produce medium). Since learning is not a term to be used with the unfamiliar, and since we are trying to learn in fact demand precisely that sort of understanding, the real process works the other way round: not from the child outwards to the world, but from the dimly discerned periphery of that world towards the absorbing and organizing mind.

Professor Egan is also right to emphasize that his stage of development must, while they last, be regarded as fully legitimate in themselves, and as fully legitimate in themselves.

to push us into the next stage before the recipient himself decides to make the move, though the teacher will constantly keep the door open and perhaps show the territory lying beyond. Indeed, even when we pass through a stage always retains the possibility of being surmounted: the full development of a person can become only if it allows mythic, romantic and philosophical elements to surface in the mind, benefiting from all his previous experiences. Without a voice, a mystery, a delight, a majesty, a moral, and a capacity to master of knowledge in general, a mature understanding cannot even be reached, nor can it endure as long as earlier ways of completing learning remain available to the curious mind. What point is recognized, for instance, if those who will speak of the child-like mind of Einstein's mind: his mind is not in the least like that of a child, but he had not lost the ability to think of reality in all the ways tried on the road to ironic maturity. How does all this work out in the practice of the

faiths in a passionate demand for social revolution. Unable, on the one hand, to let go of his intellectual crutch, but on the other to avoid seeing how different it is from his own mind, he is, in writing, the permanently "drunk" thinker in a room that is really fit to make the world ache. Of course, there are others in getting stuck at any one point, but they are not writers. Those who never

The ultimate end of education is to assist the emergence of a mature personality based on understanding and sympathy. For some reason or other, the education of his physical nature does not develop the active individual to develop himself the role that in moving him forward is strictly limited. And so often, the guiding teacher has never even realized that it is a phase beyond the physical education is likely to do harm. At the very least, we rethink our current conviction that education is a natural process to have some of the of a false god.

"Buud wrote to a friend; 'I don't know if you have heard that Nogales has given me a million francs to make a talking picture with complete spiritual freedom which I hope, in consequence, will make all who see it blush with shame. It is a feature film and more than an hour long. I'm thinking of calling it *Lo Bastio Andaluz*.' Though I would prefer *Abolir la Constitution*. Naturally, neither the National Assembly nor any other

Swine before

Patrick Carnegy at 'The Pig Organ, the new children's opera by Richard Blackford and Rod Hughes, given at the Round House in London, turned out to have less to do with musical fun and games than with gluttonous friegs laying about them with strings of sausages, with elephantine porpoises masquerading as mammoths, and brassbands as boomorangs. Children of all ages relished their part of the

Roy Fuller on a week's television

Bunuel was also swift to change the sole condition relating to the Vicamite's patronage; that of the *visita*. Bunuel wrote, "My presence

The plot of *L'Age d'Or* concerns a couple (Gaston Modot and Lysa Lys) who are prepared to break off and share this love, despite the concerted efforts of their backgrounds, the arate, religious feelings and their own mental turmoil exploded in Freudian terms, which persist in trying to force them apart. The action is deliberately

From "L'Age d'Or"

congratulated Buntin on his work and expected the audience to thank him for his act of generosity financing such a significant original piece of art. He was disappointed.

The surrealists had issued simultaneous manifesto, expanding on the issues raised by the first

wrecked auditorium, before the
Parliament chief of police ordered the
cinema closed in the interests of
public safety.

Embarrassed by his owning such
a combustible property, the
Viscount, whose surname has
given him the sole ownership of
government buildings, the film

Nicholas Wapshott on Bunuel

"Buud wrote to a friend; 'I don't know if you have heard that Nogales has given me a million francs to make a talking picture with complete spiritual freedom which I hope, in consequence, will make all who see it blush with shame. It is a feature film and more than an hour long. I'm thinking of calling it *Lo Bastio Andaluz*.' Though I would prefer *Abolir la Constitution*. Naturally, neither the National Assembly nor any other

Bunuel was also swift to change the sole condition relating to the Vicamite's patronage; that of the *visita*. Bunuel wrote, "My presence

The plot of *L'Age d'Or* concerns a couple (Gaston Modot and Lysa Lys) who are prepared to break off and share this love, despite the concerted efforts of their backgrounds, the arate, religious feelings and their own mental turmoil exploded in Freudian terms, which persist in trying to force them apart. The action is deliberately

From "L'Age d'Or"

congratulated Buntin on his work and expected the audience to thank him for his act of generosity financing such a significant original piece of art. He was disappointed.

The surrealists had issued simultaneous manifesto, expanding on the issues raised by the first

wrecked auditorium, before the
Parliament chief of police ordered the
cinema closed in the interests of
public safety.

Embarrassed by his owning such
a combustible property, the
Viscount, whose surname has
given him the sole ownership of
government buildings, the film

Patrick Carnegie at 'The Pig Organ'

The Pig Organ, the new children's opera by Richard Blackford and Ted Hughes, given at the Round House in London, turned out to have less to do with musical fun and games than with gluttonous fridge laying about them with strings of sausages, with elaphine porcupines masquerading as abanambrothers, and brabzonzo chops as boomcrangs. Children of all ages relished that part of the

entertainment while, so far as it can tell, remaining perplexed by the rhyme and reason of the rest. The story was some kind of fairy-tale, featuring an odious knight, a princess who falls for a swineherd, and a farrow of child-piglets got up in pink jump-suits to be cuddled and sweet as a litter of puppies. There was heavy irony in the ease with which the rather unhand-some wretcheder mediated the hunting melody in praise of the pig into a love-song addressed to

The pig organ itself envailed in the six piglets, each of which was capable, when pointed at and directly prompted by the harp, of emitting one solitary note—a game, not unlike playing upon a row of tumblers, each filled to a different level. It was parsimonious of the composer to find so very little force in this splendid invention to do—more than a shaky scale and concerted "eeks". Surely what was

wanted *hes-dea-vera* some *pro-*
honest grunts and unwhin-
squealing? Certainly the pig-
were horribly well heaved, and
seemed odd that in a children's
opera there should be next to
nothing for the children to sing.

There were agreeable enough
numbers for the adults (Helen
Walker and Jack Irons outstanding
in the cast that I saw), some of
which were newangled instruments like
the "awionin" and "xylofrotter,"
nicely atmospheric interludes, and

efficient (if somewhat treacherous) writing for the orchestra might. But *The Pig* Organ lacks musical panache, and neither the composer (who conducted) nor the producer did justice to the potential of Ted Hughes's libretto. Perhaps the most unfortunate aspect of the show may have been due to an uneasy feeling that there might be a black pudding—or even a payable—hidden somewhere between the lines.

The best passages are on the role of the United States and Soviet fleets. The essay ends with a series of apocalyptic warnings about the increasing influence of Russia across the world through the navy, expertise acquired in the past years by the "new school of admirals" to the policymakers of the West.

"The intentions of the USSR are a matter of continual debate but there are inevitably matters of detail. This strategic world-wide aim has been advertised to the West for three decades. The Soviet Union's strategy in intimidating the Soviet Union's declaration to 1965, this statement bears as many questions as it answers."

The details of Soviet strategy are difficult and puzzling at the moment. This account hardly explains the implications at Vietnam, Cuba, and Cyprus, and the advent of a Soviet puppet and the advent of the Cubans in Africa are omitted altogether, let alone the temperance of the world of Japan today. It is simply that many of the valuable and stimulating arguments of this essay are buried in a long and tedious exhortation to whip opponents and to imagine, through the floor.

Snap, crackle and pop

Philip Hytch on primary science

Science In Action: Living with Computers. By Barry Binkley and Robert Lewis. Wayland £3.50.
The Family Scientist. By Judith Mann. Macdonald and Jones £6.95.
Collins Young Scientist's Book of Space. £2.95.
Collins Young Scientist's Book of Power. £2.95.

Teachers responsible for selecting books for the science section of the junior or middle ranges, or well as parents seeking suitable reading for scientifically minded children, will find something of interest in all these examples. An important but difficult decision concerns whether to opt for a book such as *Living with Computers*, which deals with a fairly specific topic, *The Family Scientist*, which presents a bumper selection for family consumption, or one of the Collins pair, both of which attempt a rather less ambitious coverage of a broad topic.

Living with Computers claims to "describe in simple terms what a computer is and what it does" (publishers' notes). Messrs Binkley and Lewis certainly manage to tell us what it does, but the help of clear and interesting examples drawn from a wide field of application, including hospitals, airlines, supermarkets, criminal investigation

and traffic control. The text, varying in style from the helpfully descriptive to the somewhat less convincing attempts at chatty simulation, is illustrated by well chosen and, in the main, clearly reproduced black and white photographs. However, we are not told so clearly what a computer is. We learn that "All the forms of storage have one thing in common: the data is coded as a series of numbers and ones" but beyond that we remain in the dark. There are abundant examples emphasising the computer's lightning speed, but no explanation as to why this is possible. Nevertheless, this book provides an interesting aperçu for those with only a vague knowledge of this crucial area of applied science.

The Family Scientist seeks to involve its readers actively in a rich variety of scientific pursuits ranging from Science in the Home, including sections on Food and Cooking and the Science of the Body and Mind, through hardy perennials such as Heat and Cold, Water, Light and Sound, to the science of the sky and of the atmosphere. The text, the illustrations, the diagrams, the experiments to be carried out, and the explanations are clear and accurate, and are supported by good photos, graphs and diagrams. Most children, and some adults, will find this book fascinating to browse through, and many will want to engage in the wide range of investigations

carefully and encouragingly provided by Judith Mann. The two Collins publications represent the latest additions to the Young Scientist series, earlier examples of which have been reviewed in this journal. The approach is common to all: the reader is transported from the simplest to quite sophisticated scientific concepts in an astonishingly short space. The linguistic problems which this creates are considerable, but the author, Michael Kentzer, assumes, rather optimistically, that the young scientist will overcome this obstacle to smooth progress.

Both books are attractively produced, with lots of illustrations of generally good quality, and, like *The Family Scientist*, invite the casual browsing which may lead to more serious study. Interestingly enough, the book of *Power* does provide, in the space of about half a page, a quite satisfactory explanation of what a computer is. I am delighted that the authors of all these books have provided an index, encouraging the young scientist to develop his information retrieval skills and thereby his efficiency as a reader. But where there is a choice, my own preference would be for the smaller, specialist book rather than the compendium, though both have their place.

Pan-European

B. S. Roberson

Outlook Europe. General Editors: Keith Gordon and John Rubrial. Core Book 95p.
Atlas £1.95 and 95p.
Teachers' Handbook 95p.
Each title £1.50.
Macdonald Educational.

This is a substantial and flexible series (14 large 48-page booklets and a teachers' handbook) covering a great range of material on, or drawn from, Europe. Although the books may be used as straight texts, the sympathy of the editors is clearly with the project method, with much group work and individual assignments, and this is a resource series for such work. The content is adapted to the several CSE European Studies syllabuses now appearing, but it can also provide liberal background material for O level work.

The core book is recommended as the basic text, and it fulfils its function. Europe is defined, and its common characteristics sketched in. Geography gets a quick review, as does history and modern. A flavour of any unity Europe may have comes more from this book than from several of the others. The atlas is a gem, but has its weaknesses. A political map which does

not have some form of colouring for the countries is fundamentally misleading. Currencies in the economic map are incompatible. "Sugar beet" is misspelled as "sugar be".

1945 and After is a sound account of the major items in post-war European history. It weighs the value of the industrial and capitalist systems, the modern human geography, the environmental disaster, the nuclear pollution and wild life preservation, the economic recovery, the social and political changes, the international level. Science, Technology and Education, Leisure are in similar case.

This series is a mine of information, reasonably up to date, of the style of teaching in the hands of the best pupils. In the hands of the best pupils, it can produce results. In others, the content is a quick review, as does history and modern. A flavour of any unity Europe may have comes more from this book than from several of the others. The atlas is a gem, but has its weaknesses. A political map which does

Statistics, dynamics etc

F. W. Kellaway

Essentials of Applied Mathematics. By J. R. Irwin. Edward Arnold £3.95. 7131 0366 X.

The applications of mathematics have come much to the fore in recent years. There are now few fields of activity, whether social, economic, political or technological, in which the subject is not closely inter-related. Traditionally, however, and especially in the school context, applied mathematics has normally been taken to mean mechanics—statics, dynamics and sometimes hydrostatics. Mr Irwin has followed this tradition in the main, but some qualifications should be added to that interpretation of his book.

The aim of the work is to cover, in a single volume, the applied mathematics content of the A level mathematics syllabus. But with a good chapter on probability and with considerable emphasis on vectors and calculus, there is a modern and efficient over-arching of the whole.

Moreover, the organization of the text is to be commended. The chapters are broken down into relatively short units, each with its own set of exercises. The quotations are

outstandingly well devised, and range from some requiring only straightforward direct use of principles just studied, to others involving more complex themes. Many of the latter are marked with an asterisk to indicate that they may introduce ideas or techniques not necessarily specifically dealt with in the text. The author suggests that these may be used as a means of extending the class, or as a first attempt at them, which is a significant indication of the sensible and satisfactory teaching approach that is evident throughout the book.

Other examples of the quality of the writing are the sound treatment of the relationship between mass and weight, and the insistence that when integrating, the constant of integration must never be overlooked. Similarly, the chapters on centre of gravity (with vector notation usefully prominent), on elasticity, on motion, and on simple harmonic motion, read with a refreshing smoothness that reveals an understanding of the difficulties such topics present to pupils.

The out-and-out mathematical specialist will need something more than is provided here, but for the average sixth-former the book could hardly be bettered.

Irish past

Jessica Saraga

A Short History of Ireland. Sixth edition. By J. C. Beckett. Hutchinson £6.95. 0 09 13984 0.

In the 27 years since J. C. Beckett's *A Short History of Ireland* was first published, it has not been superseded as the most competent and clear introduction to Irish history available. Beginning with the Gaelic Conquest, Professor Beckett takes us to the present day, up until 1972. He has also revised and rewritten the sections on social and economic conditions, but the original and nineteenth-century content in order to bring them into line with recent research.

There are still astonishingly few books on Ireland in our schools and libraries, considering how Britain and Ireland have fed and bled each other over the centuries, how they are locked together still. Thanks to this new edition there is at least one standard work which we shall be able to continue to use with confidence.

French poets

Robert Béar

Introduction à la littérature française. By M. B. Béar and D. W. Baros. Stanley Thomas £2.95. 95950 073 X.

This is the first English edition of a Dutch initiative. It consists of some 50 passages or poems by French writers, spanning the past five centuries. Starting with François Villon most of the famous names are represented, the last example being taken from *Ville Franche*, a novel by Patrick Modiano, published in 1974. Each passage is preceded by a brief outline of the author's life and work, and followed by a few simple questions for discussion. A fairly detailed vocabulary notes, printed separately, accompanies the volume.

This anthology could well be used in the sixth form or in classes for adult students. It is an attractive work with a few pleasant illustrations.



This Cypriot bride, with money pinned to her dress, appears in *Rebecca* is a Cypriot (£2.50). Another in *A. and C. Black's* excellent picture book series about minority groups in Britain.

Metropolis

London: The story of a city. By Fey Ross-Mogerty. Macdonald £2.95. 356 05308 9.

This pictorial history of London is highly recommended for its many excellent full-colour photographs and reproductions of contemporary illustrations. The production values are first-rate, and there is a really excellent reference section at the back with detailed time charts, lists of famous people and street names and their origins, in places to visit.

The descriptions of modern London (e.g. City of Contrasts and scope to be as satisfying as the body of the book, where the author really does tell the story of London so effectively, factually and interestingly.

Children's literature

Gerald Haigh

Fraud! Gerald Haigh

Forgers. By Lance Salvay. Central £1.95. 7226 5169 1.
First Unsolved Cases. By Jo Franklin. Franklin Watts £2.50. 81 484.
Fakes and Forgeries. By Jo Franklin and Colin King. Heinemann £2.50. 211 3.

Schools are an ideal place for a whole, unbroken wall of books. I would say spend any money I have on fiction, and if you have no fiction, then buy one of these books.

Each of these books is a very successful in its own way. All could be more imaginatively written than the rest of the lot. *Forgers*, what to make of the Lindbergh case, for example, would hardly think that it is a "mystery" in the usual sense of the word. It is a bit off-putting that you only get three chapters written in short sentences, and under control, and the rest is a list of names and dates.

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science review

Equipment for the eighties

JOHN A. BARKER and BOB FAIRBROTHER survey equipment on show at the Association for Science Education's recent meeting

Specimens and micros

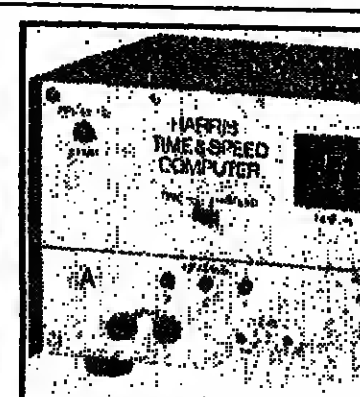
This year the Association for Science Education met at the University of Hull and there was less new material on show than in earlier years. Griffin and George were showing their bio-systems kit at £24.05, a prototype of which appeared at the last meeting. This kit enables the biology teacher to construct a range of apparatus for physiological investigations including a respirometer or a potometer. A handbook provides detailed instructions on using the apparatus, which is easy to assemble and dismantle. From the same firm there was a well designed new hand viewer for 35mm slides and film strips (£4.23). They also had some new demonstration material. Industrial melanism (£7.87) consisted of mounted specimens of normal, intermediate and melanic pepper moths, and the comparative anatomy series included a set of eight different femora at £36 mounted on a display board.

A relative newcomer to the exhibition is Brockhaus, who displayed a range of slide sets and work sheets exploring new areas of biology such as selection and Cereus nemoralis at £195, and a slide set with a viewer and a work programme covering areas of CSE and O level biology. The slides are supplied as a strip with plastic mounts and the container easily converts into a viewer. It is very reasonably priced at £3.85.

WTA had a prototype of a very attractive looking electronic thermometer at £110, with a range of -55 deg C to 150 deg C. Its quoted accuracy is 1 deg C and it uses a liquid crystal display. They also introduced a series of three data store units with a storage capacity of 250, 500 and 1,000 bits. These are mains or battery powered and priced between £120 to £240. Philip Harris Biological, after their successful introduction of an animal tissue culture kit some years ago, have developed one for plant tissue culture for £8.25. This enables the investigator to propagate small plantlets from cauliflower. The kit provides the media, containers and full instructions.



Osmoloid rotary thermometer; Harris time and speed computer.



Last year Philip Harris introduced their data memory unit with a range of sensor units. This enables an automatic record of experimental results to be made, for example, from a light meter or a temperature sensor. This results can be replayed via an oscilloscope or a chart recorder. This year they have produced two additional units to be used in the system: a simple respirometer at £17.85 and a potometer at £9.45, both of which will be of particular value to biologists. For the uninitiated student the early stages of dissection are crucial since organs and blood vessels are so easily damaged.

Although even at sixth form level for dissection is carried out nowadays, most sixth form biologists have to dissect rats. Philip Harris have developed a set of dissection packs comprising a filmstrip, a comprehensive student guide, and teacher's notes. It costs £9.75. Other items which caught my eye were a revised human chromosome analysis set—£4.75—and a new set of electron micrograph prints—£2.40. Finally, there was a safety resource pack at £25, providing material for an introductory course for 11 to 13 year olds.

Osmoloid has a pond and stream study kit for £19, containing apparatus and guides to enable a junior class to investigate a freshwater habitat. It includes nets, pond dipper, lenses, pipettes and a book to identify freshwater animals. I noticed quite a range of new microscopes. Griffin and George have two new junior microscopes. One, the Griffin Junior £27.76, is for elementary work with magnification up to 200 times. The other is a junior stereomicroscope, £34, with a magnification of 20 times.


Philip Harris also had a student microscope at £39.80 with four objectives on a rotatable nose-piece. The interesting feature of this model is a base which can be rotated so that

Brockhaus, 7, Watton Road, Middle Barton, Oxford OX5 4EE.
Griffin and George, 285, Haling Road, Wembley, HA0 1HJ.
Irwin-Dosman Ltd, 294, Purley Way, Croydon CR9 4ZL.
Osmoloid Educational, 104, Park Road, Gosport, Hampshire, PO13 0AL.
Philip Harris Biological Ltd, Oldnixon, Weston-super-Mare, Avon, BS24 9NJ.

If there were one thing which characterised the manufacturers exhibition it was the increased number of microprocessors on display. Texas Instruments, Philips, Zilog, Griffin and George, Linrose Electronics, Unilab, all offered microprocessor assemblies which can not only be made to do a wide variety of jobs but also enable some basic principles of systems electronics, computer programming and science to be learned. It is possible to start for about £200 and then additions can be made which increase the sophistication, in some cases as far as building one's own microcomputer. Individual details and prices differ and it would be necessary to consult the various catalogues and to know how far you wish to go before making the initial purchase. All manufacturers will demonstrate their apparatus to individual schools, and some are prepared to run free courses for a reasonable number of teachers. If you are interested, write to one of the firms.

There is also an increasing number of pieces of apparatus making use of microprocessor technology. As an example, Philip Harris has a time and speed computer, continued on page 28

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Adaptation team: Perrot, Hughes-Evans, Campbell

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Full details of APPL materials

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Energy transformations

JOHN HARRIS surveys materials concerned with the use and conservation of energy



"Why can't we have double-glazing like everyone else," cartoon from "Energy in the Home", an Open University short course.

The message on the hoarding now says "... using it wisely is everybody's business". Quite a change from recent days when the same organization encouraged us to put a tiger in our tank and others exhorted us to Think Electric or use High Speed Gas. Now "Gas is too good to waste" and we must "Use it wisely". Evidently the suppliers of energy are worried, and rightly so. What can teachers do towards helping the next generation of consumers to understand the issue?

The study of energy has been part of science courses for a long time and may indeed be elevated to the status of a unifying theme in some integrated science schemes. Energy transformations and the universal principle of the conservation of energy are prominent in such courses. (Though one might ask how well the principle is understood.)

The front page of a November Daily Mail offered "Another top on Petrol" on the lead story, but further down the page about improvements in the design of hydrogen-fuelled cars ended: "The main advantage is that there would be no danger of hydrogen running out — it can easily be produced from water". There was no recognition of the fact that it must cost at least as much energy to obtain hydrogen from water as one can recover by burning it. The juxtaposition of the two stories is thoroughly misleading; one wonders whether deliberately so or out of ignorance.

But the conservation of energy principle, which says that energy cannot be created or destroyed, is not the same as energy conservation — how to use less fuel and make sure there is some left for our grandchildren. If children took the idea of energy conservation seriously, they might ask why we need to worry about the amount of fuel we use if all we are doing is transforming one form of energy to another.

At one level this calls for some kind of discussion of the ideas of the second law of thermodynamics. Indeed it is just this apparent paradox that introduces the treatment of the second law in Nuffield Advanced Physics. Such ideas are arguably best left for older students, although one does not have to introduce the subtle ideas of entropy and disorder; the law of entropy is used up in doing jobs and making things go seems an obvious one. Perhaps the socially vital lessons on energy conservation could precede those on the scientifically unifying principles of the conservation of energy.

Some useful material intended for children who are at the intuitive and concrete operational stages of their intellectual development — broadly 6-9 year olds — was published by the Department of Energy last autumn.

The Primary School Pack about Energy and its Uses contains a wall chart showing forms of energy (coal, oil, gas, nuclear, wind, solar); a 12-frame filmstrip showing scenes

In the life of a child, all involving energy; a set of stimulus pictures involving energy use and waste; 12 work cards which aim, among other things, to help children arrive at a working definition of energy and to think about ways of using less fuel. A 16-page teachers' handbook suggests how the items might be used, and gives further addresses and a book list. The Department's booklet "Energy: A Key Resource" is also included.

The Primary School Pack was developed in Humberston. Teachers of science, humanities and home economics in other parts of the country are preparing material for several other age groups, including students in further education.

Teams entering the departmental National Energy Saving Competition for Schools will now be busy completing their projects before the closing date, February 29. The competition is in two classes: Juniors (7 to 11) and Seniors (12 to 18), and the final will take place at the Science Museum, London, on May 20. Sixteen entries will receive an honor for three months, and they may be joined by winners from other counties running similar competitions.

Science in Society is the title of a one-year course intended for sixth formers and further education students. It leads to an A level examination. One of the major themes is energy. Among the aspects considered are world use and world resources of fuel, "alternative" energy sources, and the possible risks involved in using various energy sources. To encourage students to think about the use of energy in their own environment there is a section on "Energy in the home", which looks at the cost and use of different fuels and discusses fuel economy and U-values. The title Heating Multi-Project Pack is also used, and this involves students in coloring the heat loss from a (typical) home, the cost of heating it and the cost-effectiveness of different forms of insulation.

The aims of "Home heating", as of the computer assisted learning packages in the Schools Council's Computers in the Curriculum project, are similar. The student is asked to feed in the characteristics of his or her home: size, building materials and construction methods, location (altitude, exposure), so called indoor temperature, and so on. The unit is intended for a range of ages and abilities in secondary and further education and could well supplement formal work on heat flow. Default values are built into the computer programme so that if a user cannot specify, for example, the type of wall construction, it is assumed to be a brick-cavity wall with light plaster.

The programme will calculate how the specified home loses heat, and how much, and the running costs for various fuels. (Keeping that data base up to date will keep some members of the staff busy.)

The Joint Matriculation Board's Energy Resources (AO level) will be examined for the first time in 1980.

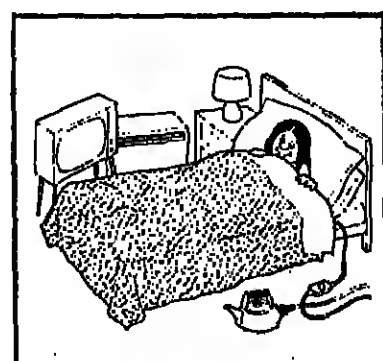
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Energy continued

1980. The syllabus is presented in three parts. Part 1, the Context of Energy Resources, deals with the nature of energy and energy problems; the demand for and supply of energy; and impacts of energy usage. Energy resources, including solar energy, fossil fuels, nuclear fuel, hydroelectric, geothermal and ocean power are the subject of part 2, while part 3 is devoted to energy policy. The syllabus suggests that a fair amount of detail and knowledge will be expected in all these areas, and notes that the time allocation for teaching the course should be the same as for an ordinary level syllabus. The assessment is by one three-hour written exam.

Several curriculum development groups are producing material that may help us help a future generation to "save it". "Energy 2000", "Keeping the heat in", and "Recycling" are some of the units in Nuffield's Working with Science series, which is intended for use at A level sixth formers and further education students.

"Energy", published in 1979 in the Nuffield Science 13-16 series, deals more with energy transformation



Staying in bed is not an infallible way of saving energy

tions (and hence conservation of energy) than with energy conservation. One of the titles planned for a later phase of the project is "Making the most of energy". Each unit consists of a 20-page pupils' book and a teachers' guide.

Other organizations are active, too. For example an education pack entitled "Energy" is produced by the Centre for Alternative Technology.

Plenty of teaching aids dealing with energy, its supply and distribution, are commercially available. There is an increasing amount about alternative sources, and aids dealing directly with energy conservation are now beginning to appear. For example part 2 of the tape-slide sequence Energy from Dinna Wyllie is entitled "Conservation".

The oil companies, Central Electricity Board and the like, between them produce a large number of charts, slides, films, booklets, and so on related to energy. Here again the theme of conservation is just beginning to be noticeable. British Gas has produced a board game Save it — suitable perhaps for five to nine-year-olds, in which a player pays a penalty for wasting energy, and is rewarded for saving it. For example, if you leave the television on while no one is in the room you go back 16 places; but if you take a shower instead of a bath you get two extra turns.

British Petroleum's film Energy in Perspective has attracted considerable attention. It is well made with some powerful images, and makes the cogent point that, in historical perspective, the present age of high energy use is a unique one — and may be short-lived. Although pictures tell much of the story, the film's commentary would be difficult for younger children.

An increasing amount of education in this area takes place outside school, college or other formal educational institution. Television programmes such as David Bellamy's *Belted Man* increasingly refer to the need to conserve. More specifically one might mention Granada's TV series *A House for the Future*, and the accompanying book.

The Open University short course Energy in the Home which attracted 1,700 students in its first year, is

being given again this year, and probably twice more. It includes a set of eight units (such as "A major of degree", "Baths and draughts", and "television programmes"). A work book enables students to build up a picture of fuel use and energy flows in their own homes. Insulation is emphasized and so are the savings made possible by a change in behaviour pattern, or proper use of controls. The final unit deals with some important matters — cost and financing.

Children pick up much more than we actually consciously teach them. In the area of conservation, what teachers and other adults do may be just as important as what they say. If, because the school's heating system has to be properly controlled, teachers have to open wide classroom windows to prevent children falling asleep — then many of the lessons we might try to teach, with or without the materials mentioned, may go out of the window too.

According to a recent survey, Energy Management for Schools, one school could have saved a quarter of its fuel by better management. The vital lessons of energy conservation will be much more effective if we set our own house in order.

Nuffield Advanced Physics Unit 9, Change and Chance (Longmans).

The Primary School Pack about Energy and its Uses. Information Directorate, Department of Energy, Thames House South, Millbank, London SW1P 4QJ. Science in Society.

Association for Science Education, College Lane, Hutfild AL10 9AA. Central Heating Multi Project Pack is one of several roles playing exercises on energy themes developed at Robert Gordon's Institute of Technology, Schoolhill, Aberdeen. Others are Power Station Game, Hydro-power Project, Power for

Home Heating. Distributed by Edward Arnold (Publishers) Ltd, Woodlands Park Avenue, Maidenhead, Berkshire SL6 5BS.

Working with Science. Published by Longman Group Ltd, Resources Unit, 9/11 The Shambles, York.

Centre for Alternative Technology, Machynlleth, Powys, Wales. Energy.

Dinna Wyllie, 3 Park Road, Baker Street, London, NW1 6XD. Save it.

British Gas, 59 Bryanston Street, London W1A 2AS.

Energy in Perspective. From BP Film Library, 15 Beaconsfield Road, London NW10 2LE.

A House for the Future. By Torrance McLoughlin, Independent Television Books Ltd.

Energy in the Home. Associate Student Control Office, Open University, PO Box 76, Milton Keynes MK7 6AN.

Energy Management for Schools. From Schools Energy Project, Architectural Association Graduate School, 34-36 Bedford Square, London WC1.

Prices range from £5 to £15.



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Specimens and micros

(continued from page 27)

The proliferation of microprocessors was reflected at the ASE this year: Texas Instruments, Philips Harris, Griffin and George, Linnars Electronics and Unilab all offered assemblies with a wide variety of functions, which enable some basic principles of systems electronics, computer programming, and science to be learnt. System details and price differ, so before purchasing it is important to know how far you want to go, and to compare the catalogues. All manufacturers will demonstrate their apparatus and some run free courses for teachers.

The quantity of apparatus using microprocessor technology is also much increased. Philip Harris have a Time and Space Computer for £130. It measures the time it takes for a known length of card to interrupt a beam of light, and computes the speed. It will store up to eight pairs of results on two channels and display the values on four-digit, light-emitting diodes. The two channels mean that two separate motions, such as two colliding dynamics carts, may be analysed.

The same firm has a set of Olmstead's solid state instruments which operate by comparing the time taken for a beam of light to pass through an internal reference voltage. The experimenter adjusts a calibrated dial. If the dial setting is too high a light emitting diode flashes. When the light stops flashing the value can be read to an accuracy of about

2 per cent of full scale. Three instruments with varying input resistances are available, each costs £13.75. Also from Philip Harris there is a Gas Pressure Unit (for individual student use (£11.50) and a Glass Chimney Shelf (£3.10) which can be purchased together or separately.

Ideas for Education Ltd had some simple, cheap pieces of apparatus imported from India. Many of these offer good value for money. They included a Conductivity Apparatus for £1.05, Ventilation Apparatus for £4.20, and a 3.3 amp rheostat for £11.70.

Probably the best buy from Osmiloid this year is the Thermastick, a robust thermometer which reads temperatures from -10°C to 120°C, with an accuracy within 1°C. It costs £7. They also have two very good Spring Balances, 0.1 kg and 0.100 kg, each costing £3.10. The spring is enclosed in a plastic tube. When the balance is in use a marker is pulled down the tube and left behind to give a record of the maximum reading.

E. J. Arnold has redesigned their Science Packs. These vary in price from £11.32 for the Study of Forces pack to £22.09 for Magnetics and Electromagnetics. Each pack contains sufficient apparatus for a simple study of a topic in physics to late junior or early secondary level. There are 14 packs in the range. E. J. Arnold also have a cheap and simple set of optics kits, including with basic topics such as light sources, mirrors and lenses and more complex ones such as interference, diffraction and polarization. They cost about £1 each, which is cheaper than last year. A set of 12 costs £10.

At the other end of the price range the same firm offers the excellent Millikur apparatus designed to demonstrate the particulate nature of electricity, it costs



Millikur apparatus for electricity demonstration.

£123.80. The cell and integral microscope are conveniently mounted on top of the power supply and oil drops are produced by a squeeze bulb attached.

Texas Instruments Ltd, Manor House, Bedford MK41 7PA, Linnars Electronics Ltd, 24/26 Manchester Road, Northolt CW9 7NL.

Unilab Ltd, Clarendon Road, Blackburn, BB1 9TA. Ideas for Education Ltd, 87a The Bridge Road, Braintree, Essex, Wiltshire BA15 1RX.

Film review

Life blood mechanisms

by John Barker

Life and Structure of Haemoglobin 16mm colour, 29 minutes. Made by Paramount Oxford Films and produced by the American Institute of Physics for the National Audio-Visual Aids Library, Paxton Place, Glosy Road, London SE27 6JZ.

This film shows how research elucidates the structure of haemoglobin, and the mechanisms by which this molecule picks up, transports and releases oxygen. The film demonstrates how it was discovered that the magnetic properties of haemoglobin change when it is oxygenated. Perutz then describes the years spent in X-ray diffraction studies of the compound and the problem of analysing the data. Other workers show how techniques such as magnetic resonance were used to provide more evidence which helped gradually to establish the fully three dimensional structure of the molecule.

The function of the molecule which results in sickle cell anaemia is investigated. The inherited disease distorts the red blood cells, and reduces the amount of oxygen carried around the body. The film shows how a minute change in the haemoglobin molecule can cause major differences in its function. The interchange of a single amino acid unit can be a matter of life or death.

Finally, studies of short term changes in the molecule are described which highlight the relationship between the laws of physics and the knowledge generated by research.

This interesting film portrays the exciting interplay between physics and biology. The concepts developed and the research tools used are complete but, fortunately for the non-physicist, none of the discussion questions, and a short glossary are provided.

Chemistry for "O" Level

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This HANDBOOK contains all the essentials for students preparing for "O" Level examinations in chemistry. The chapters are short, and as far as possible each is confined to a single topic so that each section of the work can be easily understood. The text is amplified with descriptions of specific experiments and illustrated by simple diagrams of the type found in examination papers. Progress tests and specimen examination questions are included.

1st edition 1980

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New varieties of approach

MICHAEL CLARK reviews materials for geography

The Earth Today: Britain Transport. Building materials: houses. Farming, part 1. Farming part 2. Water. Double-frame film-strip and handbook, £2.25 each; optional sound cassette, £2.25 each. Visual Publications, 197 Kensington High Street, London W8 6BB.

Twenty years ago the filmstrips in a major new series on the geography of Britain would have carried titles like "East Angles" or "The Industrial North East". Their approach would have been essentially descriptive, and their presentation conventionally structured under a predictable list of sub-headings. It is against such a background that the new series should be judged, since it reflects the substantial changes which geography has undergone in the last two decades.

The distinctive characteristics of place and region remain as obvious as in the past, but they are no longer the primary focus. Indeed, it is refreshing to find here that no single theme dominates the geographical perspective. Instead, a variety of approaches are offered, ranging from the traditional historical surveys, including present features and patterns, analysis of recent trends and case studies of the complex background to many current problems. With such an extensive menu it is difficult to imagine any geographer being unable to find something to his liking.

As always overall success relies on design and technical quality and here V.P.'s products show great improvement. The visual element is varied and imaginative,



Poetry of doomed youth

by Edward Neill

Willfred Owen—his life and war poetry by Roy Blatchford. Two cassettes with booklet. Studytapes Ltd, Bradford Road, East Ardsley, Wakefield WF3 2JN. Tapes, £11.25 plus VAT. Booklet, £1.25.

These Studytapes on Owen offer in the first instance an account of his life and development, then a mixture of reading from "major" poems with critical comment and an attempt to establish occasion, context and intention. Although their overall effect is marred by some jejune and implausible mechanical remarks on technique, they can be strongly recommended.

The main poems include *Strange Meeting*, *Insensibility*, *Apollonia*, *Peace*, *My Heart*, *Afternoons*, *Young Man*, *The Soldier*, *Exposure*. They are read in an authoritative and not overly actorish manner. The biographical material is considered a little heavy in presentation, though some think it pleasant enough.

Good points are made about both the immediate and broader social context of the poems, about the deliquescent literary tradition Owen was working in, about his relation to other war poets, notably Sassoon. The contemporary social context, with its jingoist misapprehensions

with particularly creative use being made of superimposed images, and of multiple images within a single frame. The 16-20 page handbooks which support each filmstrip exceed by far the traditional notion of accompanying notes. The material is structured to meet the needs of every teacher; a few key sentences for the weak-willed, a succinct summary of definitive points for the busy, and a surprisingly comprehensive expansion of associated themes for those with the time and inclination to dwell at depth. Optional cassettes are available with a recorded version of the key sentences.

The variety of approach adopted makes it impossible to generalise about the contents or structure of the filmstrips. "Transport" is atypical, split equally between geography and history. This blend of ideal material for a study of transport development, but precludes in-depth treatment of current problems. A number of important issues are raised briefly, but limitations of space encourage rather blunt black-and-white evaluation of complex matters. The visual presentation, however, is diverse and effective, including ground and air photographs, maps, diagrams, drawings and prints.

The same is largely true of the other filmstrips. *Building materials* focuses in spite of the quality of the illustration and the information provided by the handbooks, this filmstrip will appeal in direct proportion to one's previous knowledge of the topic. Although a few issues concerning design are raised, other more geographical implications (such as cost factors, or the environmental im-

part two covers livestock, but also introduces important management aspects such as research and development, breeding programmes, and animal husbandry. Unfortunately, other equally important themes like marketing, quotas and subsidies are dismissed with little development. The overall coverage is, however, both academically and technically impressive, and many teachers will be eager to see further additions to the series.

is discussed, and I particularly liked the suggestion that Apollonia pro- vided Owen with a response to that very odd figure Robert Graves, whose suggestion that he should write more optimistically is characteristically disturbing.

I also admired the way in which the material points the potentially keen and able A-leveler firmly in the direction of Horrell Owen's journey from obscurity, and too concerned with poetry was written in a hurry and would surely, on the tape itself convincingly suggest, have been revised. What he calls "poetry" should be qualified.

In bringing together two forms of failed imagination Owen shows himself as a great modernist poet. The death of this astonishingly talented and inspiring 25-year-old a few days before Armistice, after he had survived some of the bloodiest fighting of the War, still stirs one to pity and indignation.

Further information from Christopher Diggs, Keeper of Extension Services, Dundee Museum and Art Galleries, Albert Square, Dundee, DD1 1DA.

Give us the tools

The new "User's Handbook" from Neill Tools is described as "both a text book and a reference manual ideal for students and apprentices as well as engineers and mechanics."

It contains nearly 300 pages of tables, diagrams, illustrations and technical information. Topics include, using hand tools, the use of the eight sections has a supplement on health and safety at work. The book illustrates Neill tools and describes their use, but is also applicable to other toolmakers' products.

"User's Handbook" costs 50p, a copy, including postage, from Neill Tools Ltd, Department HWM, Napier Street, Sheffield S11 8HB.

Bridge disaster

The hundredth anniversary of the Tay Bridge Disaster is marked by an exhibition at the Central Museum, Dundee, which runs until March 14 1980.

The items on show trace the story of the bridge from its design to its collapse, when it took with it a train and the lives of 75 passengers and crew. Among the supporting material are slides, postcards, badges and booklets, and the museum can offer illustrated talks, guided visits and loan kits to schools.

Further information from Christopher Diggs, Keeper of Extension Services, Dundee Museum and Art Galleries, Albert Square, Dundee, DD1 1DA.

resources

Tourists and cowbells

by R. H. W. Cooper

Swiss Alpine Villages in Transition by Peter and Gina Corrigan. £1.50 plus V.A.T. Transport and Development: a Corribean Case Study by David Wright. £3.55 plus V.A.T. Hydroelectric Power in North-East America by Sheila Jonas. Longman Common Ground, Longman House, Burnt Mill, Harlow, Essex CM20 2JE.

A few years ago a Swiss Alpine resort received complaints from visitors that the traditional Alpine cows complete with bells, were no longer part of the ambience. The locals, who had deserted dairying for the more lucrative tourism, under pressure from the tourist industry, remedied the matter the following year by allowing cows to wander freely over the alpine pastures although none had time to spare to see that the cows gave milk.

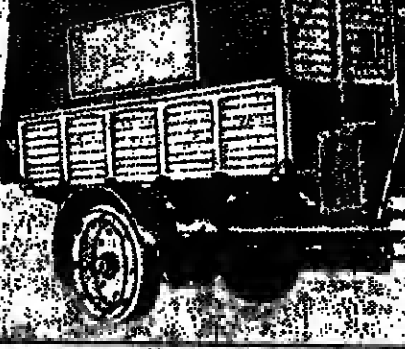
The challenge and modification in the traditional way of life is the theme of the filmstrip *Swiss Alpine Villages in Transition*. The area under study is the district of Entremont in Canton Valais, a French-speaking part of southern Switzerland. The area is called locally the Pays de Troix Damos and previously the three valleys were isolated, the inhabitants simply cultivating the small arable fields around each village. With the coming of modern communications (the Val d'Entremont now takes the Swiss-Italian traffic via the St. Bernard Pass and Tunnel and a new auto-route opened to Hamburg in 1977) the way of life has been radically altered.

The filmstrip opens with the kind of map/diagram familiar to students of ski-inclines, showing the disposition of the main villages, the meadows (middle pastures) and the alpine (high summer pastures). In the next few frames we see a series of photographs of the landscape, and the filmstrip ends with a shot of a bus or St. Lucia is accompanied by an examination of the various roles it plays in the course of a week.

The set and the text book both deal with the effect of tourism on a traditional society and could lead to a profitable discussion on the dissatisfaction many West Indians now feel about tourism.

The film *Hydroelectric Power in North-East America* by Sheila Jones deals little to the text book *Atlantic to the Great Lakes* by the same author. The frames largely cumulate old-fashioned data of the old-fashioned dairy of Ontario.

The problem of arable fields are discussed; in particular the consolidation of land parcels previously divided by inheritance laws into small too small to work. Even so the size of the consolidated parcels



Leyland solid-tired three-tonner (1907). One of the illustrations from "Road Transport in Great Britain", a free booklet from the National Freight Corporation. The chart includes sections on transport through the ages, starting with the pack-horse, and UK transport statistics showing the most popular methods of freight transport and the type and quantity of goods carried by road, rail and pipeline. The chart section is a segmented circle, each section of which contains profiles of particular haulage companies together with the details of the kinds of food in which they specialise. These include clothing and textiles, solid and liquid waste, frozen foods, car transport and furniture removal. Mention is also made of a number of ancillary companies providing repair and recovery services to keep the operators' vehicles on the road, and computer programmes designed to improve systems of distribution. The chart is available from the National Freight Corporation, Argosy House, 215 Great Portland Street, London W1N 6BD.

proved costly and difficult for machinery to work. Further difficulties include the effects of floods on bridges and, paradoxically, lack of rainwater, the latter remedied by an updating of a complex medieval system, the Risse du Levrou, a 24-kilometre, high-level canal.

In many of the frames one can see the infiltration of tourism. Many chalets in the region have been let as holiday homes, and new chalets equipped with all modern conveniences mingle with the old wooden barns and stables. On the terrace of a high cable station there is a sensation of a well-tended of the environment. It is a feeling shared by the local farmers who cling, obstinately, to older methods, local customs and festivals.

The accompanying handbook is informative and well written, the photographs in many cases, most suitable for CSE or O level work. The other slide sets are complementary to the new and vastly improved "Longman Revised Course Geographies" series. The book *West Indies* by David Wright is one of the more outstanding in this series and his folio on *Transport and Development: A Corribean Case Study* is a most useful accessory. The slides show how the disposition of the smaller islands poses communication problems and depicts some of the solutions, old and new. The earliest is provided by building schooners in the poorest and smallest islands (wood photographs here). A shot of a bus or St. Lucia is accompanied by an examination of the various roles it plays in the course of a week.

The set and the text book both deal with the effect of tourism on a traditional society and could lead to a profitable discussion on the dissatisfaction many West Indians now feel about tourism.

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A new bouyancy at the helm

CHRISTOPHER GRIFFIN BEALE profiles John Bell, secretary of the Schools Broadcasting Council

A rear-admiral might seem an incongruous figure to take the helm of the Schools Broadcasting Council, the body established and entirely financed by the BBC yet independent of it, to represent educational interests to the corporation. But John Bell, the SBC's new secretary, an enthusiastic man in his fifties, would be nobody's stereotype of a naval commander.

Until he joined the SBC a few months back to prepare for his new posting he had spent his entire career in naval education, starting as an instructor (lieutenant) in Greenwich alongside David Amborough and another future senior BBC executive, Kenneth Lamb. He rose to become director of naval education which embraces a surprisingly diverse range of activities, from schools for the children of naval personnel to postgraduate courses, overlapping with training and—by some historical quirk—including responsibility for the Navy's meteorologists and oceanographers. His commitment to education could be measured in another way: he has amassed three degrees before and during his naval career.

Bell identifies many similarities between the BBC and the Navy or organizations, down to an intriguing parallel between young naval cadets at sea and BBC producers in the extent and limit of their autonomy.

To expect any great change in SBC or BBC educational policy from the time of Bell's predecessor, John Robinson, would be to misread the influence of individuals. But Bell's is a key job, lying between the BBC and the constituent parts of this rather strange body, which Bell established in 1929 as a buffer between the Corporation and the edu-

cational world, preserving the BBC's autonomy, yet assuring the educational world that the BBC's schools output reflected educational principles and classroom need.

Although proposals come from BBC departments, programmes are produced "at the request of the Educational Council for the UK" and can only be made with its approval. Later there came a further (now continuing) Education Advisory Council, of which Bell is also secretary. Its influence is purely advisory and it lacks the SBC's power of veto.

The SBC for the UK meets formally only twice a year, so most discussion of proposals is undertaken by numerous programme sub-committees—the "powerhouse of the organization" according to Bell. However, they all draw on the fieldwork of the educational officer, technically SBC staff, who traverse the country's classrooms to promote and observe the use of BBC programmes.

Although some observers have expressed doubts about the stability of the BBC's educational effort in the choppy economic waters predicted for the 1980s, Bell is robustly and reassuringly confident about the BBC's continuing commitment to formal educational provision.

If the licence fee again fails to keep pace with inflation the BBC regards the latest, apparently sufficient, increase as barely sufficient, might not this focus attention on the anomaly that all this schools material, and the SBC itself, which might properly be charged on local authority education budget, is in fact financed by BBC licence payers? Before the war, when the Corporation was economically buoyant, Bell de-

clined any subventions from education, lest they compromise the BBC's independence. However, Bell points out that the pupils watching at school are virtually all children of licence payers.

Other fears have been aroused by public noise about the amount of precious airtime occupied by schools programmes (and by the OU, though that is outside the SBC's responsibility)—in particular schools' domination of Radio 4 VHF in daytime. The "ideal solution", Bell recognizes, is an extra VHF channel, and that may be more achievable now the recent World Administrative Radio Conference has allocated Europe something approaching twice the existing number of VHF frequencies, though they won't be effective until 1982-3.

The other solution, publicly floated, is to transmit schools radio in the small hours, for recording by schools on tape recorders linked to automatic time switches. There has been one technical test, but Bell insists there would be no decision without an exhaustive trial. "We've got to see if it's practicable from the human point of view," he says. He also appreciates the concern of producers who would effectively lose the sense that their programmes are publicly broadcast and accessible to a valued audience of cavedroppers.

However, from his trips around schools this autumn, Bell is convinced that the most important issue for the future of schools broadcasting is the quality of the skill with which individual teachers use programmes in the classroom. And he adds his voice to that of BBC colleagues and SBC producers in calling for more in and pre-service training for teachers in the use of broadcasts.

Woman in the moon

by Ian Patterson

Queen Elizabeth—I. Letters, speeches, poems. Spoken with linking narration, by Maria Perry. Embryo Cassettes, 268 Bath Street, Glasgow G2 4JR.

The myths of Queen Elizabeth I—the Virgin Queen, Gloriana, the enigmatic woman in the moon—have never lost their fascination. And, being myths, they continually offer themselves for our comfort, emblems of completeness in a fragmentary world, changing shape but staying eternally the same. The history of Queen Elizabeth I leads into an untidy world of uncertainties and obscurities, hectorically bound up with the myths that have accumulated round her. When myths get accepted as history, all sorts of confusion about the present begin.



This cassette is designed to give a level students an idea of Elizabeth I through extracts from her letters, speeches and poems. These are set in a background of narration of the events in her life which sets the scene for the extracts and fills us in on the story. (Story, not history.)

It is a good idea. The Elizabethan period is an important one in literature as well as history, and the poetic culture that developed in and around the court in the first two decades of the century has left us with many varied images of her.

From *The Faerie Queene* and *Raleigh's Ode to Elizabeth* to the necrology of John Davies of Hereford, the cult of the queen gives shape to the ethical and political ideals of a succession of generations. Yet whatever form the cult of Elizabeth took it was far removed from nineteenth-century reverence for monarchy. Her function was as much symbolic as real, and

beneath each of her mythologized roles extended manifestations of subtle complexity. The literary symbolism and iconography of Elizabeth I, besides, only one painter among many to the historical culture in which she was such a potent figure. Whatever subject students are doing, they are entitled to some historical explanation of this extraordinary woman.

Such historical material is lamentably absent from this compilation. Elizabeth is the heroine and a portrait of her is drawn passing from childhood misfortune to magnificent old age in relentlessly novelistic fashion. The "entirely depraved" of her childhood, her education, her chrysalis-like adolescence and imprisonment are the emotional landmarks for the first half of the tape, which takes us up to the coronation.

The remaining 45 years of actual power are softened by being seen through the eyes of the "facts" of her life—from Dudley, the succession of public suitors up to Alençon, and the state of England itself. Gradually the mythic figure of Elizabeth I takes shape. No hint is given that the then old woman was anything but a perfect fact. No hint of the political emergencies, or indeed anything of politics.

The only political relationship imaginable in this world is one of submission through love, purified by the queen's personal sacrifices. The hint of political involvement is typical: "the new Gaudete, the Earl of Essex, was a silly boy who finally went too far and was executed." Tell that to the examiner.

Primarily this tape is a re-interpretation of Elizabeth I, the dramatic figure, capable of leading the most trivial comment with emotional poise. It is a mistake, too, to try for verisimilitude in the voice as it changes from that of a four-year-old to that of the "golden voice" she achieved in a dramatic leap from the Commons in 1569, which sounds unconvincingly like Barbara Castle at 60.

All of which is a pity. A tape of Elizabeth's letters and speeches, while perhaps a more interesting selection from her poem and prose letters, would certainly be very useful for A level history and English—but it would need to be either a compilation or have some serious historical narrative. The present tape is another instalment of the old myth—unhistorical and uncritical, an emotional plea for national unity in the tradition of *Our Island Story*.

Unobtrusive interrogation

by Marion Glastonbury

Ellen Entenim! Project réalisé par Sue Cowling et Helen Douglas. Cassettes and booklet. Mary Glasgow Publications Ltd, 140 Kensington Church Street, London W8 4BN.

This series of 10 interviews, each lasting for two to three minutes, is intended for use by teachers in Years 14 and 17 who have been learning French for at least three years. Ten teenagers, four boys and six girls, living in various parts of France, are interviewed about their families, education, leisure activities, sports and hobbies, and their tastes in clothes and entertainment.

Although each conversation has a specific topic and the language is consistently simple, the effect is naturally and unconsciously to draw the listener into the world of the interviewees. The series is a friendly and unobtrusive manner of eliciting clear and spontaneous replies.

The booklet, which accompanies the cassette, provides transcripts of each interview followed by pupil exercises. These contain: three exercises; a dozen direct questions on what has been said; a summary of the dialogue with blanks to be

filled in from selected vocabulary, and a section, *Et Vous?*, which invites the pupil to supply relevant information on his own situation and opinions.

These suggestions are thoughtful and well constructed. They promote comprehension, illustrate the diversity of the questions, and help to formulate an appropriate answer. Furthermore, they succeed in stimulating youthful interest without any recorded remarks, and in this ephemera of *Je m'inspire* and *Je m'inspire* que les deux sexes sont connus en France?

Deeper discussion of life-styles might also arise from the attitudes and assumptions implicit in these questions. Why does the interviewer quiz the girls, but never the boys, on their contribution to domestic chores? What is the view of those youngsters, make no mistake, of their parents' family life? After all, from what we are accustomed to?

Ellen Entenim! is an obviously good idea, excellently carried out. The practice it affords should prove a godsend to all those well-wishers who have the task of communicating in French with British teenagers.

media

OU

You the technocrat

FRANK ANSTIS reviews "Living with Technology"

The Listener for December 6 contained an article entitled "The other Green Revolution" in which John Naughton commented on the fact that many members of Parliament consider themselves unable to make judgments in the field of technology because of their ignorance of its processes. Most members of the general public must feel similarly barred from participating in technical debates which may have a profound effect on our future well-being.

Mr Naughton was describing one of the Open University's new foundation courses: *Living with Technology*. More particularly, he was declaring that there is no real need for any of us to take a pessimistic view of our ability to make value judgments in technological matters.

One of the completed units, broadcast in December to give a forecast of the series, included a programme called "Facts are not enough" which distinguishes between value judgments and the facts from which these judgments are derived. It is presented by John Naughton who begins by defining a fact as an assertion about the world. This definition, too general for many philosophers of science, is sufficiently precise for the purpose of a programme in which Dr Harbert Ingham's widely publicized report on the relative risks involved in different methods of energy production is used as a convenient example of a seemingly factual report. This report is shown to be richly encrusted with value judgments.

Living with Technology is firmly grounded in existing conflicts. The impact of the microprocessor, the provision of additional energy sources, new farming techniques, the fight against cancer, are all matters of urgent public concern. In Europe the Green Revolution has become a politically significant phenomenon, and may soon show increasing militancy in its methods.

Students on the course, and others who may casually tune to one of the broadcasts, should be alerted by the student notes of the introductory music to an awareness that this study is of more than academic interest. In spite of such punning titles as "Home Sweet Home" and "Toma on the Range" the programmes could materially affect our lives. It is comforting to know that this impressive course is devised and presented by a team whose members seem well aware of the power of the media they are using and encouragingly open-minded in their own approach to facts.

Thames

Notes from a wooden frame

by Andrew Pegg

Music Round. fortnightly from January 24, 11.05-11.25. Some areas have additional transmissions on Fridays at 10.48.

Music Round, Thames Television's "resource for specialist and non-specialist music teachers with mixed ability classes" has had to abandon two of the seven new programmes planned before the dispute, and progress on the others has been retarded.

The spring term sees new editions of programmes on the Piano, Instrument Making and the Recorder. Nominally new, at any rate: the piano programme deals almost exclusively with the construction of the instrument, with no reference to the keyboard. It cannot help but have something in common with the programme on making instruments, however. The recorder programme, which claims to follow the changing meanings of the word, consequently deals with the recorder with the instrument itself and with the process of storing sounds. All very well, except that "What is Music?" also dealt with the recording process, and Electric Phoenix in programme 14 will examine singing and the voice.

All this suggests a lack of direction. This is most evident in the piano programme, which has a great deal in common with the old cinema

documentary "Energy", "Material Resource", "Food", and "Health"—together with a unit devoted to the study of two set books, will attempt to provide the essential skills for a technological approach to problem solving—that is, "the ability to think in terms of systems, design and modelling, to handle numbers, to quantify issues, to communicate ideas via diagrams and the written word". For this the student needs state-of-the-art mathematical skill beyond the four basic arithmetical functions. All else, including the development of word skills, is provided by back-up material.

The team's aims are ambitious, but, judged by the evidence of the broadcast material now available and some of the source literature, there are prospects of making inroads into present ignorance and lack of confidence. If a lot of students complete this course successfully, society will be better able to respond to the growth of technology in a rational and democratic manner. It would be especially encouraging if this course, beyond all others, is completed by many more students than those intending to go on for a degree.

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BBC

Degrees of choice

by Nick Thomas

Higher Education. BBC 1, January 14 and 15; 21 and 22; 28 and 29. 11.40 on the first day, 12.05 on the second day.

These three programmes provide an overview of higher education which is a badly-needed supplement to the work of teacher-advisers. Generally speaking, teachers have neither the time, the information, nor the experience to give this kind of context to pupils' decisions about whether or not to continue studying, and if so, what, where and how. The unit will be broadcast at a point in the year when upper-sixth forms will have completed their UCCA forms, but can still make changes, and the lower-sixth have half a year to plan their future. The unit will be repeated each September, just before the time when pupils make their decisions. Every pupil thinking about higher education should have the opportunity to see these programmes.

"Choices" looks at ways of deciding what to do, including the option of going straight to work and obtaining qualifications through evening or part-time courses. Sandwich courses are an increasingly important area of further education, according to the educationists who were interviewed. The choices are set in the context of the 13 to 14 per cent drop-out rate from universities and polytechnics. It is clear that a lot of people commit themselves to courses which turn out to be what they want or need. Stress is laid on the distinction between interest and career, and on the fact that it is quite reasonable to opt for a subject which fascinates you, so long as you realize that there is little chance of a job in that particular field. The key watchword is: know what you are doing.

Every effort should be made to create time-space for sixth-formers to watch these programmes. They are being expected to take one of the big decisions of their lives, on the basis of very little information, and it is vital that they choose intelligently as these programmes certainly do, is very much to be welcomed.

Film

Young blood on the tracks

by William Dale

Robbie. Thirteen minutes. Colour. The Transport, Travel and Electricity Film Library, Melbury House, Melbury Tor, Devon PL12 6LW.

Nine children have been killed this year, and many more injured, playing on railway lines. Robbie is part of British Rail's campaign to stop this.

Two years ago they produced *The Finest Line*, a fantasy film with a shock ending that created a good deal of controversy—a third of the country's education authorities refused to allow it to be shown in their schools. An "adult barrier" as British Rail put it, but Robbie is a very different approach. It is a straightforward, realistic dramatization of an accident caused by trying to cross the railway-line in the wrong place.

There are three different versions of the film, ideally except for the accident scene, which is varied to fit different local rail conditions: third rail, electrification, overhead power lines, and diesel trains. In each case the central character, an eight-year-old boy, is persuaded against his better judgment to take a short cut home through a hole in a railway fence, on his way from a football match in which he scored the winning goal. He is crippled for life—and will never play football again.

The horror of the accident is hinted rather than shown directly; the emphasis is on the consequences of his momentary mistake, especially the suffering of his mother. The theory is that eight to 11-year-olds, the film's prime target, will react strongly to the idea of causing their mother pain. It became clear at the press showing that British Rail, to its representatives' chagrin, has not succeeded in producing an undecipherable film that would stimulate thought in producing a film made that in producing a film.

film which warns against climbing through holes, British Rail is taking little to fantasy film illustrations to prevent such holes existing; and their research strongly suggests that publicizing the danger of an exploit actually attracts risk-takers. One of the main occasions for railway accidents is the dare game *Chicken*. The first point was easy enough to clear up: British Rail spends millions of pounds a year on repainting its fences, they said, but they clearly cannot mount permanent guards on every yard of track. The second point is more alarming. Obviously everyone's impulse, in trying to warn children against danger, is to emphasize that it is dangerous. If this is counter-productive, what can we do? However the experts consulted by British Rail felt that on balance Robbie takes the right approach, and we can only hope that they, and our instincts, are right.

Assuming that this is true, Robbie is a well-made film with high emotional impact, and it may well save lives. Narrated by Peter Purves of *Blue Peter*, a recognizable and popular figure, it is punchy without being sensational; its sense of how children can and talk is convincing, and time is taken to set the scene before the accident itself. Robbie seems a reasonable and effective way to approach a very real problem.

Robbie is the main use of the film as being for school showings, accompanying a talk by an experienced driver—one of the people who has to cope with the effects of railway trespass, which may have led to their killing someone. But the film can also stand on its own; and its final section discusses and illustrates the dangers of railways in general—the way in which the noise of one train can mask the noise of another, and the ability compared with cars; old so on.

Briefings

Radio and tv
CE and OU

Skills for Survival (Sunday, 15.30 VHF4). Aimed at teachers concerned with remedial education and the social encouragement of unemployed young people.

On The Rocks (Thursday, 11.25 BBC1).

A geology series using basic terminology to explain how the countryside is formed and how geologists work.

Athlete (Friday, 9.25 BBC1). Resource material for the games teacher. Different athletic skills are illustrated and practical instruction given.

For schools

Traffic Education: 50cc (Monday, 9.35 VHF4).

Five programmes for 15 to 16 year olds who are considering riding mopeds. "Street sense" is a radio-visual programme which suggests that people must adapt to a motorized environment.

Finding Out (Monday, 9.47, Wednesday, 11.15 ITV).

Postponed from last autumn, a unit on life in France, Italy and Germany.

Communicate (Monday, 9.52, Wednesday, 10.40 BBC1).

Aimed at pupils aged between 13 and 16 who need encouragement to develop spoken and written English. *Radio Thin King* (Monday, 9.55 VHF 4).

For seven to nine year olds with reading difficulties. Each programme contains a simple later association exercise and activities for the more advanced.

Storing Out (Monday, 10.28 ITV).

Postponed from last term, this series is concerned with relationships, moral values and some of the areas of concern felt by 14 to 16 year olds.



Cliff railway.

Maths in a Box (Tuesday, 9.58, Friday, 10.15 BBC1).

A maths miscellany series for 6 to 7 year olds aims to assist and augment classroom work in practical mathematics.

Advanced Studies: English (Wednesday, 9.30 VHF4).

Six conversations about *Manservant* for *Manservant* between Dr. John Wilders, adviser to the BBC's Shakespeare project and Susan Hill, novelist and critic.

Home Economics (Wednesday, 10.30 BBC1).

A new unit designed to explore links between science and home economics.

The French Programme (Thursday, 10.25 ITV).

Five "Brick-Brac" programmes bring a new dimension to third year French.

Reform Man (Friday, 9.30 ITV). David Bellamy traces the evolution of life on earth.

Maize and giant sculptures

by Claudette Everly

Seeds. Part 1: Formation, 20 frames; Part 2: Structure, 26 frames. Part 3: Germination, 27 frames. Colour film strips with notes, £5 each.

Produced and distributed by Marian Ray, 36 Willetts Avenue, Surbiton, KTS 8BD.

The actual reproduction of flowers is on many biology syllabuses and this series of three film strips provides comprehensive coverage of the topic.

All the frames are in colour, and feature drawings and diagrams of high quality. It is unfortunate that

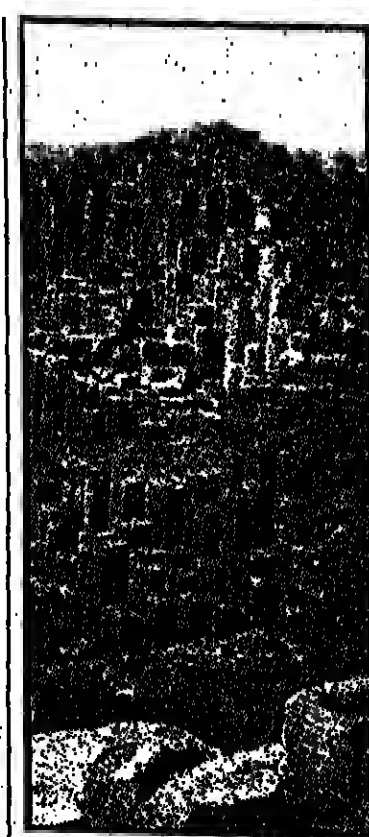
a list of common and proper names, together with the number of the frame on which the specimens are featured. It is a pity that some of the scientific names chosen for maize and Shepherd's Purse, are incorrectly spelled.

Part 1 shows the relationship between the reproductive organs of several flowers and their seeds and fruits. There are details of the events occurring in the ovule up to the time of formation of the mature, fertile seed. The order of the frames is a strange, for the sequence on embryo sac development is interrupted by a frame on ovule structure. The specimens illustrated are the standard ones, namely pollen formation. In the life cycle and embryo development in the Shepherd's Purse.

The illustrations in Part 2 cover variation in seed shape, size, colour and food reserves and deals with specimens and details such as the development of the air in mums, that are frequently neglected. The author must believe that biologists are "foolwits", who fail to appreciate the beauty of seed coats, for frame number 11 shows seeds as giant sculptures being viewed by a microscope; a frame that is both silly and out of context.

The third strip covers the structural and physiological changes that occur during germination. There are many useful graphs (for example the effect of methods of seed storage on percentage germination, the rate of germinating seeds and the dry weight changes in part of a germinating seed) and tables, such as the effect of sowing date on crop yields of navy bean and cotton.

As the order of frames in the strip is at times illogical, and as teachers may want to use two frames from different strips to illustrate a point, the greatest value and flexibility of use will be gained if the slides are cut up and mounted as slides.



Result columns. One of the illustrations from Pictorial Charts Educational Trust. The accompanying text explains that "The Giant's Causeway in Ireland is a fissure flow which cracked into hexagonal columns on cooling. If basalt erupts under the sea it cools rapidly into pillow-like shapes". The chart depicts several kinds of volcanic activity including: Vulcanian, with ash cloud and lava bombs, and undersea, with the lava forming an island. Copies available from Pictorial Charts Educational Trust, 27 Kirchen Road, West Ealing, London W13 0UD. £2.30.



no photographs of actual specimens are included, as many of the types illustrated are unusual and unlikely to be in school laboratories, even in preserved form.

The teacher's notes are accurate and give supplementary information. At the end of each set of notes is

مكتبة المدرسة

talkback

Impracticable scheme

R. T. Cooper

Elizabeth Adams, a former inspector of schools for Surrey, in *Planning for Real* (November 23), claims that the answer to boredom and tension between students and teachers, truancy and the illiteracy of some school leavers can be found in individual programmes for 14 to 16-year-olds.

Apart from the obvious impracticability of the scheme she puts forward, there are assumptions which need to be examined carefully. One is that the tensions which exist between some pupils and some teachers on upper secondary school level can be eliminated by stratagems of this sort.

As every head knows, some teachers would produce uproar in a classroom full of Trappist monks. It is a common fallacy to suppose that in a coercive situation brought about by compulsory attendance at school, there can ever be an elimination of tensions between some teachers and some pupils. It is to do with human relationships, and not with curriculum.

Making the curriculum as relevant to the needs of pupils as possible, engaging pupils in decision-making at appropriate stages of their school lives, involving parents, governors and other interested parties in curriculum decisions—all these activities have their own justifications.

network

Roots is a quarterly publication which concentrates on the theme of cultural diversity. Its aim is to "promote informed discussion, provide information and publicize good practice among those in teaching and the caring professions". The third issue, just published, has an extended article on multicultural education, and a brief account of the Shepherd's Bush Supplementary School, the oldest one in London. Copies (40p inc. postage) from 42 Ikenna Road, Enfield, Middlesex. Subscription for 4 issues £1.50; cheques to be made payable to *Roots*.

The Association for the Study of the Curriculum, formed a couple of years ago by teachers, academics and administrators who had been holding annual evening conferences on the curriculum, is developing regional groups. The next planned area will cover the three counties of Bedford, Buckingham, Cambridge, Oxford and Northampton.

An inaugural one-day conference is to be held at the Open University on Saturday, February 9, 1980. The theme is "Evaluation and Accountability: Implications for schools, colleges and I.E.S.s.". John Graham, Head of the APU and Tim Brighouse, CEO, Oxfordshire, are the main speakers. A number of specialist seminar groups are also planned. The cost is £3 (including lunch). Fuller details from Bob Moon, deputy head, Stantonbury Campus, Milton Keynes, or Bob McCormick, Lecturer in Educational Studies, The Open University, Milton Keynes, (see page 18). Closing date for applications January 18.

The winter issue of *Lib Ed* contains the second part of Ray Hemmings' article on Poulton Priory; a piece by Nigel Wright on the need for a campaign to get state funding for parents who wish to set up their own school; and a feature by Roger Holdsworth on an unusual neighbourhood school in Melbourne. There is also an A-Z of regional and national organizations and newsletters of use to community groups. Copies (30p plus 10p postage) from 6 Beaconsfield

Read, Leicester. (Tel: 0533 552085).

A research project backed by the ODA is currently being organized by Roy Gardner of the Education in Developing Countries Department at the London Institute of Education. Its main aims are: to make a collection of teacher-produced learning materials for development education in secondary schools; to develop a resource bank and information centre of such materials; and to analyse the modes of production, media used, costs, innovations, successes, etc. of such materials.

Initially, teachers in south-east England who may wish to participate are being circulated. All materials collected in this way will be held in the EDC department. It is hoped that an information exchange/network can be established.

The department is holding a conference on development education on April 28-29, 1980, at which a preliminary report will be given, and an opportunity provided for feedback from participants. Any secondary teachers producing materials concerned with development education who would like to participate or be informed further on the project's aims should contact Roy Gardner at the Institute, Bedford Way, London, WC1 01-636 1500, Ext 606 or 537).

"How the West Indian child is made Educationally Subnormal in the British School System" was a book which caused a stir when published nearly 10 years ago. Its author, Bernard Coard, then a teacher in a London ESN school, has recently become deputy prime minister in Grenada. His thoughts on the problems of West Indians and their families in Britain, as well as his views on general developments in the Caribbean, appear in an interview in a new pamphlet, published jointly by Liberation and Race and Class. "Let Those Who Labour Hold the Reins" is available (50p including postage) from 313/315, Calendon Road, NI.

Cross country for juniors

Peter Dyer

Although the introduction of the AAA Five Star Award 10 years ago widened the scope of junior school children's participation in athletics, long distance running still tends to be regarded as a secondary school preserve. But there are no convincing reasons for older junior school pupils not being allowed to run up to 2 km, as long as the activity is a voluntary one, and providing that the children are reasonably healthy.

A number of highly respected coaches have supported this notion, claiming that the longer sprints are, potentially, more dangerous because competitors, being never too far from the finish, can run themselves to exhaustion. Beyond 400 metres young children simply cannot sustain running at a fast pace.

If they set off too fast they



Many coaches now support the idea that cross-country running is suitable for older primary school children.

Access to the tests

Michael Young

A recent question from my nine-year-old daughter about verbal reasoning tests brought home to me the anxiety I felt, not only at the choice of school which will be available to her in just under a year's time, but also the fact that such a choice will be decided by the outcome of a test on which I could offer her no help or guidance.

I telephoned the IEA to see if there was any parental access to past verbal reasoning tests, and was told emphatically that they are not shown to parents. It is IEA policy, I was told, but if you want to press it further, you should contact another department.

Two departments later I stumbled upon a helpful lady, who told me that the tests were not shown to parents because of the obvious risk of such information being misused. After all, she said, the papers could fall into the hands of the press and be used for all sorts of purposes.

When I explained that all I wanted to do was see exactly what form the test took, much as an older student feels the need to look at past GCSE papers, I met with the immediate response that of course the VRT is not an exam in the normal sense of the word.

The tests being taken at the moment are, she said, totally anonymous. The results are for the central computer, which analyses overall area results and feeds them back to individual head teachers, so

they can compare them against their own assessments.

But, she said, really our policy is that the test papers should not leave the individual school's premises, so that if parents just wanted to see a copy of a paper, the IEA would be able to comply with the request.

But, I asked, what if the school refused to show me one? Ah, she said, you could tell him that at the department have no objection, but if he still refuses, you had better come back to me.

After school one evening I discussed the test with my daughter's teacher. Yes, she said, I've already started the children on work for this wretched verbal reasoning test, which they have to take so early in the fourth year.

It's so important. They have just got to adopt the right exam technique. I'm not prepared to go into the details of it, it's enough of an issue in the staff room, but the system, and while it exists there is no point in closing one's eyes to it.

Anyway, she added, the assessment is taken from the best of three papers, so there is a safety net for failures, or for children who just have an off day.

The headmaster was welcoming, effusive even, when I talked to him. They used to be termed "intelligence tests," he said, and basically what is needed is a good reading skill, coupled with the ability to comprehend the problem, answer it and quickly move on.

But, he added, assessment is not based on these tests alone. There is his own cumulative assessment of the children, plus their own class teacher's report. Of his figures, he said, did not tally with the IEA.

But no, he could not show me a copy of the test—a position I had braced myself for. I was told, "Just to give you an idea of what it is like."

It was an innocuous document comprising questions with multiple choice answers. They in general difficult further into the test, it added.

So it was not a fruitless task I had embarked on. All that was needed in sea a test paper was a certain perseverance in the face of a first and second refusal.

However, my reasons for wanting to see the paper were not entirely passive. I believed, and still do, that positive encouragement and help is beneficial in a child working towards a specific and identifiable goal.

No doubt I will be accused of wanting to crum my child. Even the headmaster drew attention to the unnecessary anxieties which parents can arouse in children.

Yet living in a London borough where 22 per cent of the 11-year-olds are changing schools in 1979 and denied their first choice, it is to know exactly by word when to encourage their children. Should the child aim for a specific position within a certain band, for example, or just trust to luck?

Educational engineering, if you like, but surely parents have some part to play in the yearly juggling at County Hall. Where, exactly, does one strike the balance between parental participation and passive watching from the sidelines?

What I have learned, however, is that any alert 10-year-old need again I will at least be able to give my daughter some reassurance.

schools in the area also adopted sport, and eventually a series of inter-school meetings were organized during the autumn and winter terms, for both boys and girls.

Cross-country running is excitingly a team game, although it allows the individual plenty of scope. It provides many children who might otherwise be overlooked with alternative skills and activities.

As in other junior games activities, girls and boys events have to be run separately. Being strange, boys are usually capable of covering up to a third in distance more than girls, so some adjustments have to be made in route planning.

There is some scope for arranging team tactics when running against more than one other school. But these should be kept to a bare minimum, usually involving two or three of the stronger runners. Generally speaking, after a little experience, children decide what pace and position in the pack suits their individual abilities.

Peter Dyer teaches at Millbrook Junior School, Westville, Kibye.

At first children run in pairs. Shortly afterwards the interest was great enough to organize mixed ability teams of eight. Several other

endpage

Adults fill the empty desks

More than half of New Zealand's secondary schools

have adults learning alongside children. Sylvia Goodman looks at

the advantages of this development

The idea of adults going back to school is not a new one. But it is probably only in New Zealand that it is being put into effect on a large scale. Although in some cases there may be only half a dozen adult students, other schools may have adults accounting for more than a quarter of their enrolment.

It is no secret that falling school rolls were a major reason for the development of the adult intake in day schools. No doubt initially it seemed a cheap and easy method of keeping teachers occupied. But, as so often happens with the education of adults, those involved have become increasingly convinced, and are now deeply committed to the project for its own sake and for its wider implications.

The principal of Aorere College (most secondary schools in New Zealand are called colleges) regards it as "merely a surface indication... of the view that education is not something which starts at the age of five and comes to an abrupt halt at the age of 15 or 16, but that it consists of experiences that continue an afloat through life".

He sees adults in day school as one expression of the total need for community education in the part of Auckland served by the college. This seems to be generally true of schools operating the system on any scale, although the emphasis varies: in one school the adult day-intake might be the cornerstone of their policy, in others it is just one of many aspects.

New Zealand has recently become aware (as which Western country has not?) of the concept of "community". This has resulted, among other things, in a limited allocation of funds to selected schools to help them implement a policy of community education. Aorere College is one of the lucky ones, and the principal has been used to extend the normal school guidance services, so that they have two full-time and two half-time counsellors on staff, in addition, are able to give a small time allowance to other staff involved in guidance work.

This exists for the benefit of the children as well as adults, but it does mean that there is a network of people geared to help all students in the choice of appropriate courses and careers, and with any problems, personal or educational, which may arise during their time at school.

Newlands College, Wellington, with only good and some token remission, has appointed a deputy for adult students. In the event he has to perform many of the functions carried out by Aorere's counsellors, but in addition to his normal teaching load, Hagley High School, Christchurch, has deliberately devoted some of its ordinary resources to supporting the adult intake, and these members of staff with a sizable involvement in it have come remuneration to help them cope.

Hagley has the largest adult day-intake of any school in New Zealand. Their current roll is 780 adolescents and 220 adults—28 per cent. Most of the adults enrolled (75.5 per cent) have committed themselves to four or five subjects, which means full-time attendance throughout the school week.

The vast majority return to school at the 15 plus level. Even if they have never studied the subject before, they are able to slot into the level of knowledge which the children in the class have achieved in the lower forms. They are, however, given considerable help in the choice of subject, the level at which they should enter, its relevance to their future ambitions, and the volume of work they are taking on.

The schools which take the project seriously produce very detailed notes to help potential students find their way around the curriculum. These include thorough guidelines for the 5th, 6th and 7th form levels, and the overall objectives implicit in study of the subject; whether or not it is preferable in the subject before, and perhaps some indication as to how difficult a student is likely to find the subject.

Students are talked through the maze of regulations governing internal assessment and external examinations of the various qualification levels, and are encouraged to come and discuss their proposed programme personally with the staff if they have any doubts or queries.



Chris Wing

Not surprisingly, the majority of people availing themselves of this new opportunity (it is only since 1974 that there has been official blessing for this idea) are young women—mothers of pre-school and primary children—and as a result the schools with a large intake all operate a crèche. Even in an area where the majority of children are in their teens, the adults who actually come have young children.

Parents are seldom of school with their own children. There appears to be a high proportion of solo parents. It would be useful to know whether this is because of the crèche, or the difficulty of getting out to attend evening classes.

The survey conducted by the Department of Extension Studies in the University of Canterbury on adult learning activities in Christchurch suggests that both potential and actual adult learners tend to think in terms of secondary schools when considering a likely venue, and "it may be that even more participation in adult learning would occur if secondary schools were to make their programmes more widely known, for the evidence of this survey indicates that although the Technical Institute outranks them in popular awareness of their adult study roles, they are nevertheless used on a wider, and totally voluntary basis."

This comment refers to traditional evening class programmes run by the schools as well, but it is noteworthy that a preponderance of adults should regard school as the main source of adult education, despite the negative associations it undoubtedly has.

Adults in school seem to thrive, though success is clearly related to initial guidance and placement. They are in general very highly motivated, with specific goals, such as the gaining or improving of qualifications, usually though not always to help them with job prospects.

English is the most popular subject, and typing, maths and shorthand rank fairly high. Other subjects with a wide appeal are

geography, history, biology and art. Some people are looking rather for personal development and qualifications as a means of entry to higher education. Some teachers feel that many adults enrol with social reasons in mind as well.

Through their commitment, adults learn faster, concentrate harder than children, and progress more quickly. One teacher suggested that this was due not only to the fact that they bring their experience to bear on the subject matter, but also because they are used to making decisions and choices.

Teachers who have adults in their classes all speak enthusiastically about it, although some who teach in the same schools but do not have mixed classes are apprehensive. Those already involved, however, all feel they are kept on their toes by having adults in the class, and find they have to think more about their teaching techniques. They have to adapt to using other people's experience, and to think about the balance of the class. They also tend to use smaller groups, and to more experimental in their teaching.

The teachers all talk about the high motivation of their adult students, and the influence this has on creating higher standards for the whole class. The greater application and faster learning of the adults raise the level of expectations, and simply behavior other adults in the class, and around the school, makes for improved discipline.

Children clearly benefit greatly from many of these factors. But one or two teachers did have a few doubts on their behalf, whilst feeling that overall staff, adults and children gained. Some children do seem to feel that their privacy domain is being infringed, and not unnaturally resent special adult privileges such as smoking (although most schools confine this to specifically designated "adult areas", viz common room, refreshment area, etc.).

One or two teachers have had to reassure sixth-formers that their chances of a university place will not be diminished because adult students are also seeking to continue their studies at a higher level. This few

children whose parents or relatives do attend the same school are liable to suffer from the derision of their peers.

The mix does work, but it takes time. Adults may be impatient of what the children cannot grasp; children may resent a talkative adult. But both groups are gradually extending their experience in a new way, and learning to understand a different viewpoint. In the long run, adults are likely to become more attuned to modern teenagers and children will, at the very least, become aware that learning does not cease at 16.

The benefits which may accrue to a school indubitably outweigh the low costs of setting up the scheme. Unlike people with unusual expertise and a background which might help them communicate with difficult teenagers, are brought into the school—come to learn, try to teach, where the school is sufficiently flexible to assist with training.

Teachers become aware of learning needs outside the school, and of the many untaught skills and talents within the community which can be brought into play through play and imagination. Outside the walls, an understanding of the functions of education can grow through greater involvement with the process, and a consequent lessening of mistrust.

Nevertheless, many questions are posed. There are very specific problems associated with adult learning, and most school teachers are not even aware of their existence. Some methods which may be appropriate in the teaching of adolescents are at best unhelpful to adults. Teacher education does not include compulsory courses on the teaching of adults, although on past showing it is likely that in the course of their lives the majority of school teachers will at some stage be engaged in teaching adults.

New Zealand, like many other countries, has spare capacity in her teachers' colleges. It would seem appropriate that they should look to meeting the need for adult intake in schools has created for in-service training in adult learning and teaching, and to reviewing the relevance of similar material to in-service training.

Again, New Zealand is not alone in having falling secondary school rolls. It could be a valuable exercise for other countries with similar problems to look at the New Zealand experiment and learn from her experience. The need the project appears to be meeting is that of young mothers who are seeking to equip themselves to re-enter the workforce at a higher level than they left it.

They are people for whom the school experience was not so daunting that they fear to approach it again, nor so long ago that they feel wholly alien to it. They have specific vocational goals of which they are in general aware, and more nebulous and less conscious social and self-developmental needs.

They are adults who would learn more effectively if their teachers were made aware of their peculiar learning difficulties. They are for the most part mothers, and need either crèche facilities or a day whose timing permits them to convey their primary children to and from school.

This is evidently a very specific group, and as such should be fairly easily provided for. Eighteen hundred or so adults are being catered for in day schools in New Zealand, and there is every indication that this number will increase. Furthermore, the Correspondence School in Wellington currently enrolls about 13,000 adults in precisely this area of work. The potential seems very great, and not too difficult to tap, in view of the clear target audience.

Further, the University of Canterbury survey also shows the preference of adult students within this particular age range to study in a class in their own locality. Given also space in schools, relevant training to teachers, and adequate guidance to students, the New Zealand experience could set a useful trend world-wide for the eighties.

Sylvia Goodman is senior lecturer in staff development, department of adult studies, Harrow College of Further Education.

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Index to Appointments Vacant, Wanted and other classifications

Appointments vacant	Secondary Education	Sixth Form and Tertiary	Technical Studies	Teachers' Centres	Appointments wanted
Nursery Education	Headships 45	Colleges	Other than by Subjects 66	Adult Education 70	Other classifications
Headships 37	Deputy Headships Senior 46	Heads of Department 62	Preparatory Schools	Community Homes and Associated Institutions 70	Educational Courses 78
Masters/Mistresses 37	Masters/Mistresses 46	Scale 2 Post 62	Mathematics 66	Assessment Centres 71	Personal Announcements 78
Other Appointments 37	Remedial Posts 47	Special Education	Other than by Subjects 66	Youth and Community Service 71	Entertainments 78
Primary Education	Art and Design 47	Headships 62	Scottish Appointments 66, 67	Overseas Appointments 72	Exhibitions 78
Headships 37	Careers 48	Deputy Headships Senior 62	Colleges of Further Education	Administration 73	For Sale and Wanted and Postal Shopping 78
Masters/Mistresses 43	Classics 48	Masters/Mistresses 62	Directors and Principals 67	Local Education Authority General 76	Holidays and Accommodation 78
Scale 2 Posts 43	Commercial Subjects 48	Heads of Department 63	Other Appointments 67	Child Care 76	Home Exchange Holidays 78
Scale 1 Posts 44	Domestic Subjects 48	Scale 2 Posts 63	Colleges and Departments of Art 69	Educational Psychologists 76	Properties for Sale and Wanted 78
Middle School Education	English 48	Scale 1 Posts 64	Heads of Department 69	Examiners 76	
Headships 45	Geography 50	Independent Schools	Other Appointments 69	Librarians 77	
Deputy Headships Senior 45	History 50	Headships 64	Polytechnics 69/70	Ancillary Services 77	
Masters/Mistresses 45	Humanities 50	Deputy Headships Senior 65	Universities 69	Miscellaneous 77	
Remedial Posts 45	Mathematics 50	Masters/Mistresses 65	Followships, Studentships and Research Awards 70	Outdoor Education 77	
English 45	Modern Languages 52	Classics 65	Colleges of Higher Education 70	English as a Foreign Language 77	
Mathematics 45	Music 54	Domestic Subjects 65			
Modern Languages 45	Pastoral 54	Economics 65			
Music 45	Physical Education 54	English 65			
Pastoral 45	Religious Education 56	Geography 65			
Physical Education 45	Rural Studies 56	History 65			
Science 45	Science 56	Mathematics 65			
Other than by Subjects 45	Social Studies 59	Modern Languages 65			
	Speech and Drama 59	Pastoral 65			
	Technical Studies 59	Physical Education 65			
	Other than by Subjects 61	Religious Education 66			
		Science 66			

Nursery Education

Headships

CAMBRIDGESHIRE
CAMBRIDGE AREA
Nursery Education
Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Headteacher (following the retirement of the present holder) for a nursery school in the area of the Headteacher's Office, Cambridge. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Cambridge, by 15th January, 1980.

Deputy Headships Senior Masters/ Mistresses

DURHAM
COUNTY COUNCIL
Applications are invited from suitably qualified and experienced teachers for the following posts of Deputy Headteacher and Senior Master/Mistress in the County Council's nursery schools. Applications should be sent to the County Council's Education Department, Durham, by 15th January, 1980.

Other Appointments

KIRKLEES
METROPOLITAN COUNCIL
Nursery Education
Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Headteacher (following the retirement of the present holder) for a nursery school in the area of the Headteacher's Office, Kirklees. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Kirklees, by 15th January, 1980.

RICHMOND UPON THAMES
Nursery Education
Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Headteacher (following the retirement of the present holder) for a nursery school in the area of the Headteacher's Office, Richmond upon Thames. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Richmond upon Thames, by 15th January, 1980.

ENFIELD
Nursery Education
Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Headteacher (following the retirement of the present holder) for a nursery school in the area of the Headteacher's Office, Enfield. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Enfield, by 15th January, 1980.

Primary Education

Headships

GLoucestershire
COUNTY COUNCIL
Primary Education
Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Headteacher (following the retirement of the present holder) for a primary school in the area of the Headteacher's Office, Gloucestershire. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Gloucestershire, by 15th January, 1980.

Deputy Headships Senior Masters/ Mistresses

GLoucestershire
COUNTY COUNCIL
Primary Education
Deputy Headship of HEADTEACHER
Group 1.
Applications are invited for the post of Deputy Headteacher (following the retirement of the present holder) for a primary school in the area of the Headteacher's Office, Gloucestershire. The successful candidate will be responsible for the management of the school and the staff. Applications should be sent to the Headteacher's Office, Gloucestershire, by 15th January, 1980.

Other Appointments

GLoucestershire
COUNTY COUNCIL
Primary Education
Headship of HEADTEACHER
Group 1.
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GLoucestershire
COUNTY COUNCIL
Primary Education
Deputy Headship of HEADTEACHER
Group 1.
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GLoucestershire
COUNTY COUNCIL
Primary Education
Headship of HEADTEACHER
Group 1.
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New Printing House Square, Gray's Inn Road,
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London Borough of
Waltham Forest

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The Head will be pleased to answer further enquiries (Telephone: 021-654 1580).

Application forms, which should be returned by Friday, 26 January, 1980, and further information obtainable from the Chief Education Officer, Staffing Branch, Room 616, Education Department, Birmingham B5 3BU.

**BIRMINGHAM
CITY COUNCIL**

BOROUGH OF HARINGEY
Education Service

THE GREEN (C.E.) J.M. & I. SCHOOL
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HEAD TEACHER

required for April, 1980.
Applications are invited for the post of Head Teacher (Burnham Group 4) which becomes vacant due to the appointment of the present holder to another Headship. This is a one-form entry J.M. and I. school which has close links with the Church and Parish of Holy Trinity, High Cross, Toffenham, N17, and candidates should be sympathetic to the aims and ethos of a Church school.
Applications and further particulars from the undersigned (S.A.E.) to be returned to Rev. J. N. A. Bradbury, Chairman of the Managers, Holy Trinity Vicarage, High Cross, N17, by 28th January, 1980.
London Allowance £474 payable.
Removal expenses—100% allowed in approved cases.
The Chief Education Officer, Education Offices, Somerset Road, N17.

Headships

Applications are invited from experienced and suitably qualified PRIMARY TEACHERS for the HEADSHIP of the following schools:
Cromford CE (Controlled) Primary School, Moleck
Group 4
Estimated Maximum Number on Roll 187/80 180
Newtown Primary School, New Mills
Group 2
Estimated Maximum Number on Roll 197/80 85
Closing date 25th January, 1980.
Application forms and particulars for the above posts (S.A.E. enclosed please) from the Director of Education, County Offices, Mallock.

DERBYSHIRE
County Council

BOROUGH OF HARINGEY
Education Service

RHODES AVENUE J.M. & I. SCHOOL
Rhodes Avenue N22 4UT

HEAD TEACHER (GROUP 5)

required for April, 1980.
Applications are invited from suitably qualified and experienced teachers for the post of Head Teacher of this pleasantly situated school which includes an integrated hearing impaired unit and a newly built Nursery.
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Dorset Avenue, Romford RM1 4JA

Required Summer Term 1980

HEADTEACHER

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There is a scheme for removal expenses.

Application forms and further details (S.A.E. please) from the Director of Educational Services, Merbury House, Merbury Gardens, Romford, Essex. Completed forms to be returned by 25th January, 1980.

PRIMARY
Headships continued

LINCOLNSHIRE
HAGGITT SCHOOL, C.E.
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HAGGITT SCHOOL, C.E.

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London Allowance £474 payable.
Removal expenses—100% allowed in approved cases.
The Chief Education Officer, Education Offices, Somerset Road, N17.

LIVERPOOL
HAGGITT SCHOOL, C.E.
HAGGITT SCHOOL, C.E.
HAGGITT SCHOOL, C.E.

Applications are invited for the post of Head Teacher for the above school. The school is a one-form entry J.M. and I. school which has close links with the Church and Parish of Holy Trinity, High Cross, Toffenham, N17, and candidates should be sympathetic to the aims and ethos of a Church school.
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London Allowance £474 payable.
Removal expenses—100% allowed in approved cases.
The Chief Education Officer, Education Offices, Somerset Road, N17.

NEWCASTLE upon Tyne
HAGGITT SCHOOL, C.E.
HAGGITT SCHOOL, C.E.
HAGGITT SCHOOL, C.E.

Applications are invited for the post of Head Teacher for the above school. The school is a one-form entry J.M. and I. school which has close links with the Church and Parish of Holy Trinity, High Cross, Toffenham, N17, and candidates should be sympathetic to the aims and ethos of a Church school.
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London Allowance £474 payable.
Removal expenses—100% allowed in approved cases.
The Chief Education Officer, Education Offices, Somerset Road, N17.

OXFORDSHIRE
HAGGITT SCHOOL, C.E.
HAGGITT SCHOOL, C.E.
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London Allowance £474 payable.
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The Chief Education Officer, Education Offices, Somerset Road, N17.

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FOUR
Headships continued

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NEWCASTLE upon Tyne
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Bexley London Borough
BEDONWELL
NURSERY SCHOOL
Belvedere, Group 2

Applications are invited from suitably experienced teachers for the post of

HEAD
TEACHER

Appointment to commence Summer Term 17th April

Assistance with removal expenses, legal fees and disturbance allowance can be considered.

Application forms and further details available from the Head Teacher, Nursery School, Belvedere, Group 2, to whom they should be returned by Friday, 25th January.

SOUTHEND AREA - Advertisement

HEADSHIP

West Leigh County Infant School
Ronald Hill Grove, Leigh on Sea
(Roll 350)

Group 5 for September, 1980, or as soon as possible.

Previous applicants need not re-apply.
CLOSING DATE: 1st February, 1980.

Application forms and details obtainable from (foolscap S.A.E. required)
County Education Officer, P.O. Box 47,
Threanodale House, Market Road,
Chelmsford.

ESSEX
County Council

BOROUGH OF SOUTH TYNESIDE
Education Department

Ashley Road Diagnostic and Assessment
(a) Scale 3—Teacher in Charge of Centre
(b) Scale 2—Assistant Teacher

Applications are invited for the above posts from suitably qualified and experienced teachers, to commence duty May 1980, and for the above centre is scheduled to open May 1980. Applications and further particulars may be obtained by sending a stamped addressed envelope to the Director of Education, Town Hall, Jarrow NE22 3LE. Completed forms should be returned within 14 days of the appearance of this advertisement.

Simonside Primary School
Head Teacher—Group 6

Applications are invited for the above post. A suitably qualified and experienced teacher. This school will be formed from the amalgamation of Simonside Junior Mixed School, Simonside Infant's School and Blitham Infant's School with effect from 1st September, 1980. Post payable from September, 1980.
Application forms and further particulars are available by sending a stamped addressed envelope to the Director of Education, Town Hall, Jarrow NE22 3LE. Completed forms to be returned within 14 days of the appearance of this advertisement.

Hounslow
(London Borough of)

EDUCATION COMMITTEE

Education Department, The Civic Centre,
Lampson Road, Hounslow TW3 4ON
STRAND ON THE GREEN JUNIOR SCHOOL,
Thames Road, Chiswick, W4 3NX

Applications are invited from suitably qualified and experienced persons for the

HEADSHIP

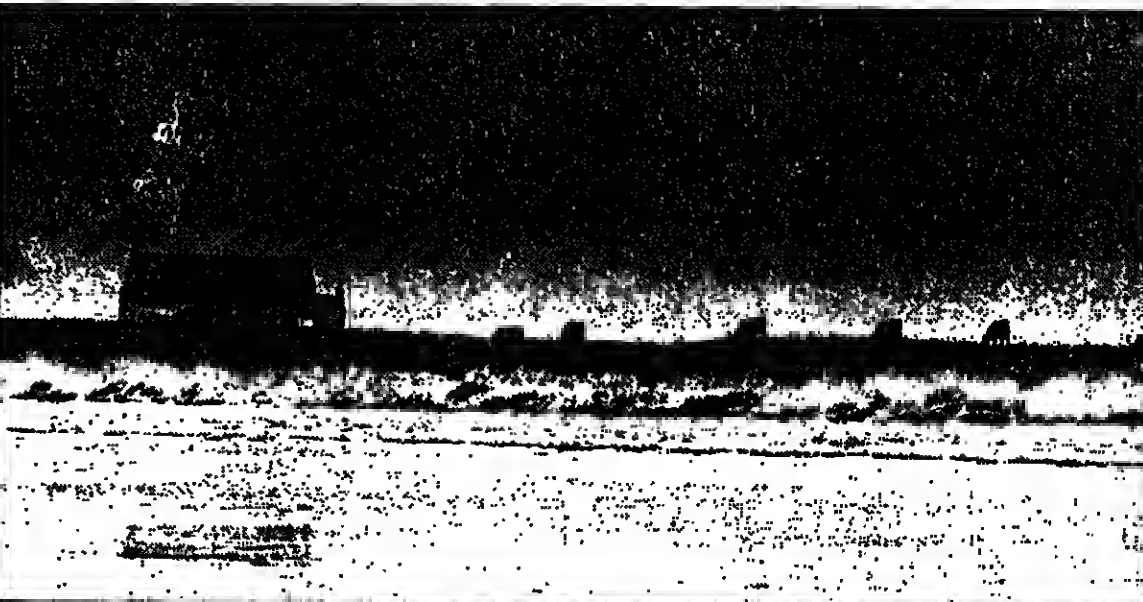
of this Group 4 school due to the promotion of the present Head Teacher.
The school roll of the school is 173.
Interested candidates are invited to visit the school by arrangement with the Acting Head Teacher (Telephone No. 01-894 7847).

LONDON ALLOWANCE £327 PAYABLE.
CLOSING DATE: WITHIN 14 DAYS.

Application forms and further details are available from the Director of Education, The Civic Centre, Lampson Road, Hounslow (foolscap stamped addressed envelope, please).

A. GROVES
Director of Education.

TRAVEL-TIME TO PLAN AHEAD



The Hebridean island of Tiree: everywhere is a vast sky of swirling clouds, fresh, rain-purified air and fast-changing seas reflecting the light.

HEBRIDEAN ODYSSEY

I did too much and left much undone but this was one of the finest tours

I have ever undertaken, writes Dudley Wilson

The Hebrides certainly stir the imagination and exert powerful attracting forces on travellers: as many communities, so different and varied in their way of life, so distant and remote, their homelands invariably of grand natural beauty, beleaguered by storms and lashed by winds.

Two small islands in particular brought special status to the Hebrides as tourist attractions. Staffs, announced to the world as geological marvels by Sir Joseph Banks in 1772, and Iona, the Sacred Isle, a place of Christian pilgrimage. Pinguin's Cave on Staffa attracts the lessening poetic light of the last century. Queen Victoria herself came, wondered and approved in her journal. But it is the Hebrides which has perhaps given the region its wider renown and its most romantic confusion.

Add to this the modern traveller's lust for commodities such as whisky and tweed and you have material reason enough for such a journey. Whisky is amply catered for with a concentration of distilleries, each with its own character, on Islay to the south; tweed is best inspected in Stornoway on Lewis far north.

Fishermen for salmon and trout have long spent happy days with their gillies on the lochs which fringed North Uist. Sportsmen have long known of Europe's best snipe shooting on Tiree. The Skye Cullins are undoubtedly Britain's finest mountain ridge seen from the sea at sunset. The best excursion from Elgol to Loch Coruik beneath the Cullin horse-shoe is difficult in surpass anywhere especially if one returns on foot along Loch Scavaig via this "bad step" track.

On a tourist's thrill of the past is now much reduced. St. Kilda has been visited on cruises arranged by the National Trust of Scotland or by lobster boat from Tarbert, where it is advertised in the Post Office window. But it is not the same as when the group of lochs some 45 miles out into the Atlantic were like the Paros than the Hebrides, were inhabited by the St. Kildians, when Victorian and Edwardian voyagers steamed in luxury to the edge of civilisation to take a peep at primitive society.

After such talk of these magical, even mystical islands with their mixture of Norse and Celtic cultures and outstanding remains from earlier settlers, some physical facts would not come amiss. There are more than 500 Hebridean islands, not counting skerries, islets and rocks, some of which are uninhabited, some of which are kept as nature reserves, some of which are used as holiday homes. There are two main chains: the Outer Hebrides, also known as the Long Isle or Western Isles, stretching from the Butt of Lewis to Barra Head, and the Inner Hebrides from Skye to Islay, a sweep of some 140 miles.

These islands are separated from the mainland by the Minch, a notoriously treacherous gulf of stormy water. All are windswept but many have sheltered spots where surprisingly exotic shrubs, trees and plants flourish as in Kiloran garden on Colonsay. Much is however, harsh—there is the bare harshness of exposed granite rock on Harris or the bare peatlands of Lewis. Everywhere is a vast sky of swirling clouds, fresh, rain-purified air, fast-changing seas which reflect light to create that immensity so widely remarked upon.

This real freedom-of-the-isles scheme cost £72 for my car and £24 for myself and enabled me to travel as much as I wished for most of the summer's fortnight. For 15 days, I calculated that my journey would have cost me £300 if I had travelled by air. I was, of course, without that go-as-you-please and if-you-please option. This is a bargain scheme and no mistake. I thoroughly enjoyed working out from innumerable ingenious routes and best value. Cheap cabins overnight on board at Harris or the bare peatlands of Lewis. Everywhere is a vast sky of swirling clouds, fresh, rain-purified air, fast-changing seas which reflect light to create that immensity so widely remarked upon.

Tackling such a huge tract of island territory crammed with interest presents something of a problem. Is one to plump for a stay on one island or to risk a grand tour embracing several? I met a family who every spring spend a week on each of two Hebridean islands, a different pair each year. They stay at pubs, bring their car and build up an intimacy with the locals and the scenery.

This strikes me as a lifetime's approach well worth the cost in time and style. Yet some would be impatient, possibly on a once only venture, to take in more sights, make more contrasts and try in more places for better weather.

For such grand tours Colonsay, Macbrayna, Barra, Orkney, Shetland and the Hebrides, have several attractively priced arrangements which they call Island Hop. These much reduced rates are available for cars, caravans, trailers, cycles and passengers on multi-muscle trips out of Oban and Glasgow for most Hebridean destinations.

Hebridean Drive Away is another idea which has found favour. These are two or three day motor tours using your own car and the ferries as hotels. This costs from £85 and covers cabin for two, car, freight, breakfast and supper on board. My special favourite is the Car

My special favourite is the Car

URBINO—IDEAL CITY OF THE RENAISSANCE

By Frederick Costick

It is a surprising fact that the birthplace of the divine Raphael, Urbino, is little-known to the majority of British travellers in Italy, despite the opinion of Lord Clerk, who confessed that it was the place, during the whole of his travels in connexion with the television Civilisation series, that he most enjoyed. He argues that it is in the court of Urbino was one of the high-water marks of Western civilization, and is the place of Federico di Urbino's palaces he says: "The rooms are so light and airy, and so perfectly proportioned that it exhilarates one to walk about them; in fact, it is the only place in the world I can go round without feeling oppressed and exhausted."

Although Federico di Urbino means little to the vast majority, his name is known to millions, and certainly to every art-lover, for he was the founder, the builder and, it would not be unfair to say, the chief architect of the palace of Urbino which stands in almost exactly the same form as he left it when he died in 1482 conducting his final campaign in the malaria marshes of the Po.

At the beginning of the sixteenth century, Bellissare Costiglione wrote in his most famous book, *The Courtier*: "On the slopes of the Apennines towards the Adriatic, at almost the centre of Italy, is situated, as everyone knows, the little city of Urbino. . . Among the greatest blessings that can be claimed for it, this I believe to be the chief, that for a long time now, it has been ruled by excellent lords. To look no further, we can also good proof thereof in the glorious memory of Duke Federico, who in his day was the light of Italy."

Duke Federico was born of Major Giovanni, the maintenance country in the north of the region of the Marche, to the south of San Marino. He was a very successful condottiere, leader of his hardy mountain folk. The riches that he earned in the service of the Popes, the Sforza family, or the Italian League, he lavished on his own city and his own people. "He adopted the plan of spending at home the money he had earned abroad, and taxing his people as lightly as possible. . . Feeling secure in a land where all gained profit from his rule, and where none were hungry, he habitually went about unarmed and almost unaccompanied; alone among the princes of his time he ventured to walk in an open park. . .", writes Burckhardt in his book on the Renaissance.

Federico's palace—which Lord Clerk calls "one of the most beautiful pieces of architecture in the world"—is the outstanding feature of this delightful hill-town. Built between 1466 and 1482, it straddles two hills, the gorge between having been filled in. A large open square, the Piazza Mercatella, was constructed below the central facade, which is flanked by two slender, elegant towers. As one climbs the steep hill and comes into this piazza, the sheer face of the palace rises high above in incomparable splendor.

The architects Luciano Laurana (a Yugoslav, and Bramante, at Giorgio were principally responsible for the building which, according to Costiglione, "was thought by many to be the most beautiful anywhere in Italy") and between campaigns Federico took a close personal interest in the glorious memory of

continued overleaf



continued overleaf

alls (S.A.E. please) sva-
lifer, 'Liamora', & Heath-

The TES Goes To Work

THE TES NOW PROVIDES ON ITS "SCHOOL TO WORK" PAGE EACH WEEK, SPECIALIST NEWS COVERAGE OF THE DEVELOPING — AND CONTROVERSIAL — RELATIONSHIP BETWEEN EDUCATION AND INDUSTRY AND THE TRANSITION FROM SCHOOL TO WORK.

Industry and education need to know about each other. They also need to keep tabs on the rapidly growing activities of the agencies and organizations, public and voluntary, that deal with young people.

The "School to Work" page supplements the attention being paid throughout the paper to the needs and interest of industrial trainers, careers specialists, youth workers, and all those concerned with equipping the young for a full adult role.

The Times Educational Supplement's coverage of education has always been broad, and it has regarded industrial training and youth affairs as part of its field. In the past two years the growing national and professional concern has been reflected in the increased space and prominence given throughout the paper to these matters. The most important developments and initiatives by central government and others, such as the new national programme for school leavers, are often disclosed or foreshadowed in the TES before you can learn about them from any other source.

TES—The weekly for news about education at all levels including vocational training.

From newsagents on Fridays price 25p.

THE TIMES
Educational
Supplement

SECONDARY

continued

NORFOLK
SOUTH NORFOLK DISTRICT COUNCIL
Education Committee
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HARROW
NATION'S MINIST SCHOL
Polish Agency, Harrow, Nidder.
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Ministry for April 1980: a T
Office of Education, The Seaboard
CSC, Harrow, Nidder.
This is to be comprehensive I

In the first two years you
follow an integrated British Cou
your learning will be expected
be familiar with the Sci
equipment laboratory.
Application forms from and
to be sent to the Head Teacher
January 20th, 1980. Please con

SALZBURG

Teachers are invited to apply following posts. Application and further particulars are from the Head of the school otherwise stated. School appointment are welcome. £474 per annum in addition to salary scale. The closing date for publication date.

EDUCATION AUTHORITY

MUSIC

Scale 1
BARNABURY SCHOOL, 100,
 Barnabury Park, Liverpool 11
 London E11 1JL
 Tel: 01-695 2014
 Admissions
 Age: 100, 11 to 12
 Required for January, 1980:
 1. A minimum of 100 pupils
 2. The school involves a transfer
 from lower school.
 3. The school is in line to Highbury
 Information Station in the Via
 Line. Most of the Allowances
 4. Further details and application
 forms may be obtained from the
 Headmistress of the school.

MIDNOROCK SCHOOL
 100th Street
 London SE13 8LR
 Tel: 01-466 2511
 10-12th Street, 100, 11 to 12

NEEDLEWORK

Soile 1

DALSTON MOUNT SCHOOL
Niar-chuill Laha, E.B.
Tigh-na-hoy
Full of part-time Teacher of Needlework
Details from the school: 264 872

PHYSICAL EDUCATION

Heads of Department

WATERFIELD (B.M.) SCHOOL.
Waterfield College,
Thames Valley University, Uxbridge,
Middlesex, UB8 3PH.
Telephone: 0181 838 8477.
Headmaster: Mr. R. A. FROST.
Deputy Headmaster: Mr. J. H. BAKER.
Sixth Form qualified and qualified
Teacher for the past of 19 years.
Mr. Frost is a member of the
(Schools) 5. Waterfield is a day
primary school which opened in
1970. It is situated in the
Area 7A in November 1970.
The school has a total of 10
classrooms 11 to 16 plus and the
Sixth Form started in September
1970. The school has a total of 10
have the look of non-physical
and a number of other
physical activities that emphasize
field of physical education. A
number of non-physical activities
energetic approach are a part
of the curriculum. The school
management, activities, and the

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if they wish their original ap-
plication to stand.

REMOVAL WORK

Scale 1

ADNEY WOODS MCURTNEY,
Eggenman Drive, 222 OAJ
7717, Orl.-510 1474
Age 35. Good mathematical comprehension.
Headmaster.

Acquired as soon as possible;
Scale 2. Remedial teacher.
The nearest candidate will be examined
under the "Remedial Mathematics and Or-
dinary Mathematics" to apply for
throughout the school and to be
re-examined in the fall.
resources within the
Department. Temporary termi-
nation of the candidates might

FURZEDOWN SECOND
 RECORD
 Volume filed SW17 900
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 Required for Jogaary or as sup
 judicial:
 A teacher of Remedial. The vac
 is to cover a fulltime post leave
 is for two terms only in the
 instance.
 Application form and testimonials
 such as possible.

Scale 1 Post
Supply Teachers: Every year, substantial numbers of young people are sought living within the immediate vicinity of the London Borough of Havering to cover vacancies in primary and secondary schools.
Applications from the District School Officer (T), Tickway House, 1301, Stanford Rd, N16, Tel 01-801-2391.

required for CASB. 1960
 needed for maintenance, material
 computer should be an
 available but essential.

is far from being only. In the list
 values
 Application form and testimonials as
 soon as possible.

Application form from the
 United States Department of
 Education, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 262

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County of Cleveland

SPECIAL SCHOOLS

ENDEAVOUR SCHOOL for Physically Handicapped (and partially sighted)
Tot Hill Avenue, Ormesby, Middlesbrough, Cleveland

DEPUTY HEAD TEACHER GROUP 7s

The Endeavour School is a purpose-built school for physically handicapped, deaf, epileptic, partially sighted and language-impaired children educated on a campus with a primary and comprehensive school. Due to promotion, a Deputy Head is required. Applicants should either hold a qualification in the field of special education or have teaching experience with one or more of the above mentioned categories of handicaps. Experience in working as a member of a multi-disciplinary team would also be an advantage.

SUMMERHOUSE SCHOOL

Physically handicapped 3-16 years
Regworth Road, Norton, Stockton, Cleveland TS20 1HR (Re-advice/leisure)

DEPUTY HEAD TEACHER GROUP 5s

Required for Easter, 1980, a suitably qualified and experienced teacher for this day special school. Applicants should have particular interest in curriculum development with physically handicapped pupils. Further details obtainable from the Head Teacher.

SCALE 1 POSTS + SSA (TWO POSTS)

THORNHILL SCHOOL
Elwick Road, High Tunstall, Hartlepool, Cleveland
A modern purpose-built building for physically handicapped, deaf and sensory handicapped and others. Required as soon as possible.

1. Teacher to take responsibility for basic work with a group of intellectually handicapped secondary pupils. The teacher will also be required to teach environmental work, including field studies throughout the secondary department, and to develop a CSE Mode 3 syllabus; to teach art and handicrafts as a member of a team.

2. Teacher required to take responsibility for language development with a group of secondary pupils and to assist with remedial reading. The teacher will also be required to teach art and handicrafts, including pottery and to take responsibility for school art and craft resources.

Financial assistance with household removal expenses is available in approved cases. Application may be made by letter or an application form obtainable from the Head Teacher at the addresses shown above. Application by letter should include detailed information regarding education, training qualifications and experience, together with the names and addresses of three referees.

Letters of application and completed application forms should be submitted direct to the Head Teacher not later than 25th January, 1980.

The Borough is within easy access of Central London and bordered by Epping Forest. London addition to salary payable.
Whitfield School
Macdonald Road, London E17 4AZ
(Headteacher: Mr. P. R. Tunor, M.Ed.)

Department for Non-Communicating Children

Required for Easter, to work as a member of a team of 3 teachers supported by Nursery and General Assistant in this department which caters for children of deaf-blind, autistic/psychotic children who have communication and emotional difficulties. It would be an added advantage if applicants had some experience in this field but all applications will be considered.

Department for Specific Language Difficulties

Required for Summer term only: to work as a member of a team of 3 teachers supported by General Assistant in this department which caters for children in the 5-9 years age range who have language impairment.
Salary for both posts: Scale 1 plus special schools allowance, plus London allowance.
Scale 2(s) for suitably qualified and experienced candidates.
Application forms and further details available from the Headmaster at the School, on receipt of an A.S.E. Closing date 28th January, 1980.

London Borough of
Waltham Forest

Waltham Forest

Waltham Forest

GLoucestershire

Scale 2 Posts

continued

ESSEX

WHITFIELD SCHOOL

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GLoucestershire

Scale 2 Posts

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ESSEX

WHITFIELD SCHOOL

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THE UNIVERSITY OF OSNABRÜCK ABTEILUNG VECHTA

Invites applications for a position as

LEKTOR IN ENGLISH

(Pay scale: BAT 1a)

beginning March 1st, 1980

Qualifications: native speaker of English, university degree in English, teaching experience and knowledge of German desirable. Duties: teaching English-Langue courses, including courses in language lab, courses in British/American life and institutions (Landeskunde).

Length of contract: 2 years, with possibility of extension. Application deadline: 4 weeks after date of publication.

Applications together with a detailed curriculum vitae and certificates to:

Dekan des Fachbereichs 2 (Kommunikation und Angewandte), Universität Osnabrück, Abteilung Vechta, Postfach 13 49, 2848 Vechta, W. Germany.

College of St Mark & St John
Dorridge Road, Plymouth PL6 8BH
Telephone: 0752 777186

APPOINTMENT OF CHAPLAIN

The College of St Mark and St John seeks to appoint a Chaplain. The College is an Anglican college of higher education based in Plymouth. It relates to both the Diocese of Truro and Exeter and seeks to provide a modern, community-oriented approach to higher education.

The College has links with other Further and Higher Education Institutes in Plymouth, particularly Plymouth Polytechnic, and there will be the opportunity to work with students in other institutions. Depending on qualifications there will be opportunity to teach in the College and to take part in other activities but it is important that the successful candidate should have a lively interest in modern higher education and the needs of students. Details may be obtained from the Principal's Secretary. There are no application forms and letters of application and a curriculum vitae should reach the Principal of the College of St Mark and St John within two weeks of the publication of this advertisement. Candidates should state their age, qualifications and experience and any other relevant information together with the names and addresses of two referees.

THE OPEN UNIVERSITY

Summer School Tutorial Staff

Appointments for one or two weeks are available at the Open University's summer schools held at universities throughout Great Britain between 5 July and 6 September.

Tutor Posts in the Faculties of Arts, Mathematics and Science. There will be a number of Tutor posts in the following subjects: Art, Art History, Music, Architecture, and Design, Drama, History, Literature and Philosophy.

Mathematics courses coded M101, M201, M203 and M283. Biology (all sub-disciplines including Genetics), Chemistry (organic, inorganic and physical), Earth Sciences and Physics.

Tutor Posts in the Faculty of Technology. Tutors qualified in Elementary Mathematics and Modelling (for technologists) (TM261), Materials Science (TM261), Systems (design, planning, implementation management, analysis, modelling of social or technical systems including project work in groups), and Engineering Mechanics (solids) (TM232).

TM283 - Introductory Electronics, and TM291 - Instrumentation. Tutors qualified in electronics and/or instrumentation; previous teaching experience an advantage.

TAD282 - Art and Environment. Tutors to facilitate creative projects in dance and movements, theatre and still photography; video/film; community print; drawing; environmental mapping and perception; sculpture; poetry and creative writing; participation in the future; food; environment; and community radio.

Tutor Posts in the Faculty of Social Sciences

D101 - Making Sense of Society. Tutors qualified in one or more of: economics, geography/town planning, politics/international relations, psychology, sociology; in French or one of the three interdisciplinary modules: law, crime and society, a political simulation exercise on the Bosnian crisis 1908-9.

D261 - An Introduction to Psychology, and D303 - Cognitive Psychology. Tutors qualified in experimental psychology; for D303 computer experience desirable.

D204 - Fundamentals of Human Geography. Tutors qualified to teach modern geography, especially with reference to urban, rural, and social geography and statistical techniques.

Demonstrator Posts. Applications for posts as DEMONSTRATORS are invited from graduates in Science to work in the areas of Biology, Chemistry, Physics and Earth Sciences; from graduates in Science and Engineering to work in the areas of Acoustics, Measurement, Electronics, Materials Science, Systems, Structures, Energy Conversion, Metallurgy, Design, Production Systems, Environmental Science and Computing; also from graduates in Psychology.

Application Procedure. For further particulars and an application form send a postcard to the Tutor Office (SS 1), P.O. Box 62, Milton Keynes, MK7 8AU. Completed application forms must reach the Open University by Monday 4 February 1980.

UNIVERSITIES

SOUTHAMPTON
THE UNIVERSITY
The University of Southampton is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, University of Southampton, Southampton SO9 4NH.

Fellowships Studentships and Research Awards

NEWCASTLE UPON TYNE
THE UNIVERSITY
The University of Newcastle upon Tyne is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU.

Colleges of Higher Education

ESSEX
The University of Essex is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, University of Essex, Colchester CO1 3UP.

HERFORD AND WORCESTER
The University of Herford and Worcester is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, University of Herford and Worcester, Worcester WR1 1SD.

COLLEGE OF ST MARK & ST JOHN
The College of St Mark and St John is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, College of St Mark and St John, Dorridge Road, Plymouth PL6 8BH.

COLAISTE BHANTARNA NA TROICARE
The Colaiste Bhantrarna na Troicare is seeking applications for a position of Lecturer in English. The successful candidate will be responsible for teaching and supervising students in the Department of English. The post is full-time and permanent. Salary scale: £11,000-£14,000 p.a. Applications should be sent to the Director of Studies, Department of English, Colaiste Bhantrarna na Troicare, Coláiste Bhantrarna na Troicare, Dublin 15.

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COLCHESTER INSTITUTE

Faculty of Technology

Head of School of Mechanical and Production Engineering

To lead a team of about thirty lecturers teaching to a range of levels from basic O-level to higher technician courses. Applicants should have sound academic and industrial qualifications and experience at a senior level in further education.

Further details and application form from: The Director, Colchester Institute, Sheepen Road, Colchester, Essex, CO3 3LL (Telephone Colchester 70271).

Closing date: 25th January, 1980.

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To lead a team of about thirty lecturers teaching to a range of levels from basic O-level to higher technician courses. Applicants should have sound academic and industrial qualifications and experience at a senior level in further education.

Further details and application form from: The Director, Colchester Institute, Sheepen Road, Colchester, Essex, CO3 3LL (Telephone Colchester 70271).

Closing date: 25th January, 1980.

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